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Everybody Fails Sometimes: Exploring Relations Between Self-Compassion for Poor Academic Performance, First Generation Status, and the Strategic Learning Beliefs and Processes of College Students

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Everybody Fails Sometimes: Exploring Relations Between Self-Compassion for Poor Academic Performance, First Generation Status, and the Strategic Learning Beliefs and Processes of College Students

by

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Dedication

This dissertation is dedicated to Jason, who never stops believin'.

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Everybody Fails Sometimes: Exploring Relations Between Self-Compassion for Poor Academic Performance, First Generation Status, and the Strategic Learning Beliefs and Processes of College Students

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Abstract

First generation (FG) students are twice as likely as their non-first generation peers to drop out of college (Chen, 2005), experiencing a host of challenges related to their FG status including poor academic preparation, limited familial support, nonstrategic college learning beliefs and processes, and problematic coping with academic disappointment. FG students who earn low grades often attribute these outcomes to an uncontrollable factor such as low intelligence (Dweck & Leggett, 1998) rather than a more controllable factor such as poor preparation for success or misunderstanding of the path to success. Some FG students matriculate through college successfully despite their risk status and one reason might be FG students who exhibit more self-compassion in the face of perceived or actual low grades are resilient even with their risk status. The study investigated relations between self-compassion for poor academic performance and the learning beliefs and processes (i.e., motivation, goal orientation, fixed theory of intelligence, self-efficacy, anxiety, and fear of failure) of FG students using hierarchical regression.

Overall, findings suggested that students with more self-compassion had more strategic learning beliefs and processes on ten out of eleven variables, regardless of their FG status. FG students did have a lower GPA and however only Asian FG students had

less strategic learning beliefs in their fixed theory of intelligence. Contrary to hypotheses, however, as a group FG students did not have less self-compassion. Further research is needed on contextual factors surrounding FG status in other FG student populations.

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Chapter 1: Introduction

Research is now looking at the challenges of being a first-generation college student. The preponderance of literature on college students at risk of low academic performance has focused on individuals who experience threats to reaching their academic goals, such as degree and certificate attainment. Research in postsecondary education has attributed these low performance outcomes to either demographic characteristics (Pizzolato, 2004) or a variety of cognitive, motivational, and affective learning challenges (Pintrich, 2004; Robbins, Allen, Casillas, Peterson, & Le, 2006). Among the demographic variables is first generation status, or students who are first in their immediate family to enroll in college.

STATEMENT OF THE PROBLEM

First generation (FG) students, or those who enroll in college where no parent has attained a Bachelor's degree, comprise nearly one quarter of all students enrolled in postsecondary education (Engle & Tinto, 2008). They are twice as likely to drop out of college than their peers with both parents having completed college (Chen, 2005). Moreover, FG students were also found to require more remediation upon college enrollment, enroll in fewer courses per semester, complete fewer credits per semester, earn lower grades, and were more likely to drop their courses as compared to their non-first generation peers (Chen, 2005). Although a large body of research on FG student characteristics underlies the wide variety of interventions focused on helping FG students

succeed in higher education, first generation students are still considered of higher risk for failure (Martinez, Sher, Krull, & Wood, 2009).

One factor hypothesized to impact FG students differentially (when compared to non-FG students) is their negative beliefs about their identity as learners, despite what may actually be true about their learning capabilities (Contreras, 2005; Penrose, 2002; Ramos-Sanchez & Nichols, 2007). According to Robins and Pals (2002): "The transition to college typically involves an increased sense of academic challenge and a corresponding heightened threat of failure. Consequently, college may be a time in which implicit self-theories are particularly implicative for how individuals approach achievement situations" (p. 314). For students who have characteristics associated with academic risk, research has called for targeted attention to the "development and maintenance of positive self-perceptions and beliefs, particularly academic self-efficacy" (Chemers, Hu & Garcia, 2001, p. 63), given the significant impact self-beliefs have on achievement (Bandura, 2001).

Non-FG students conventionally experience college as a fulfillment of familial expectations, continuing their secondary education, and following in family traditions of enrolling in college, whereas FG students may experience a deviation from their family's traditions, and facing intense academic, social, and cultural transitions to college (Engle, 2007; Bowman, 2010). College exposes students to times of uncertainty and unfamiliarity, not only requiring adjustment, but also re-evaluation of self and reexamination of learning beliefs. Even though FG students may initially feel prepared for college (Pizzolato, 2004), earning low grades can force students to recalibrate their

confidence for college learning and question their skills. When students build a history of perceived or actual failure in postsecondary learning, patterns of negative self-talk and faulty belief systems emerge (e.g., blaming failures on uncontrollable attributions such as ability rather than examining one's effort) (Robins & Pals, 2002). When these messages are not appropriately addressed, students can quickly find themselves in a downward spiral of low self-efficacy resulting in poor achievement. FG students are more likely than their non-FG peers to find themselves in this spiral, having received fewer positive, supportive messages concerning these negative beliefs. Thus, they may begin to believe they are not "college material" (Striplin, 1999). At this juncture, the first-generation risk characteristic may transform into an over-arching status, perpetuating defeating beliefs throughout their learning experiences.

In her 2004 qualitative study exploring student risk factors, Pizzolato reported that high-risk students affected by such learning experiences were more likely to reconsider whether they belonged in college when confronting postsecondary challenges. Further, Pizzolato found that students in her high-risk sample reported feeling less capable than their peers and even began to question their own abilities. As one of her participants reported: "It's difficult when you feel dumber than everyone in your class, but it's worse when a professor acts like you're dumb just because of who you are, and like without giving you a real chance." (Pizzolato, 2004, p. 431). In sum, the effect of perceived academic failure and the formation of negative self-beliefs on college students can powerfully influence their subsequent achievement and degree attainment (Penrose, 2002).

THEORETICAL FRAMEWORKS

Negative self-beliefs are but one of the innumerable variables that influence achievement and degree attainment. Research has found relationships between students' learning strategies, thoughts, feelings, and behaviors related to college achievement. Weinstein's (2007) Model of Strategic Learning (MSL) encapsulates only those variables that can be improved through effort and practice, such as test-taking skills. The MSL posits *skill*, *will*, *self-regulation*, and the *academic environment* as four interactive components required for strategic learning to occur. Of primary interest for this study is the *will* component, which describes motivational and affective variables related to strategic learning. The dimensions of will that were of specific focus to this study were: (a) self-efficacy; (b) achievement goal orientation; (c) motivation; (d) anxiety; (e) fear of failure; and, (f) theory of intelligence. Given the interrelated nature of the four MSL components, poor experiences in test-taking or reading comprehension, for instance, (i.e., academic *skill*) tend to influence other areas on the model (i.e., *will*). When students experience disappointing grades, motivational, and affective coping strategies become important factors in student achievement. FG students are one population who experience a disproportionate number of low grades compared to their non-first generation peers (Chen, 2005), and they have demonstrated significant challenges coping with these events (Pizzolato, 2004), leading some eventually to drop out. Strategies aimed to help FG students manage initial events that yield disappointing outcomes might be beneficial to them because they are more inclined to over-identify with academic failure.

In light of this issue, the current study focused on *self-compassion*, or extending compassion to one's self in instances of perceived inadequacy, failure, or general suffering to cope with poor grades (Neff, 2003a). Neff has theorized self-compassion to include self-kindness, mindfulness, and a sense of interconnection with others. Self-compassion has been found to ameliorate the negative effects of anxiety, post-traumatic stress disorder, eating disorders, and depression (Neff, 2011). While there is a growing body of research on the importance of self-compassion for well-being (see Neff, 2009 for a review), there has been less research on the relationship between self-compassion and academic motivational variables (i.e., goal orientation, fear of failure) (Neely, Schallert, Mohammed, Roberts, & Chen, 2009; Neff, Hsieh, & Dejitterat, 2005).

In her dissertation, Conway (2007) examined resilience and self-compassion in community college students from low-income families. The researcher hypothesized that those students who exhibited a greater degree of self-compassion would be more resilient with respect to their risk characteristics (i.e., ethnic minority status, low socioeconomic status, non-traditional age) and found an overall significant mediating effect of self-compassion on their academic success ($r = .23$, $p < .001$). These findings help pave the way for future investigation looking at the effects of self-compassion on college students who are at risk of low performance to understand why some first generation students fail and some do not.

SIGNIFICANCE OF THE CURRENT STUDY

In general, although attrition rates are higher among FG students and college achievement is lower (Vuong, Brown-Welty, & Tracz, 2010), some first-generation

students are as successful as their non-first generation peers. This discrepancy between first generation student outcomes begs the question: what is the underlying mechanism (or mechanisms) contributing to these differences? Given that first generation students tend to struggle with high school-to-college academic and psychosocial adjustment, one plausible explanation for those students who perform well in college and graduate may be that they are more self-compassionate than others in terms of coping with poor academic performance. Further, self-compassion may be an important component of motivational patterns underlying academic achievement for FG students (Neff et al., 2005). To date, however, there has been no research examining how self-compassion might impact the link between college students' first generation status and academic outcomes.

The present study investigated the relation between first generation status, self-compassion, and the motivational learning variables, exploring whether self-compassion moderates the relationship between first generation status and academic motivation. The motivational learning variables were operationalized to include: self-efficacy, achievement goal orientation, motivation, anxiety, and fear of failure [(Neff et al., 2005)], as well as implicit theories of intelligence.

Chapter 2: Integrative Analysis

The integrative analysis and interpretation section begins with an overview of research on the first generation college student. It then includes a summary of the theoretical frameworks for this proposed study: the Model of Strategic Learning (Weinstein, 2007) and self-compassion (Neff, 2003b) with respect to the outcome variables of interest. First generation college students are reintroduced in the next section of the integrative analysis, which discusses FG students' unique challenges as the rationale for the current study, and hypothesizes how self-compassion for poor academic performance could buffer first generation college student outcomes. The final section outlines the research questions and hypotheses addressed in the current study.

EXAMINING THE FIRST GENERATION COLLEGE STUDENT

In the past 25 years, significant attention has been dedicated to improving outcomes for first generation college students, including institutional retention efforts such as: (a) learning frameworks courses (i.e. the University of Texas at Austin's EDP 310: Individual Learning Skills) and (b) high school to college transition programs such as Gear Up and TRIO, which includes Upward Bound, Talent Search, and Student Support Services (Gullatt & Jan, 2003). Despite all that is known about first generation college student achievement and learning, first generation college students are still considered to be at risk for dropping out and for experiencing poor achievement (Chen, 2005; Yazdjian, Toews, Sevin, & Purswell, 2008). In order to address the unique profile of student attributes posing threats to achievement and retention, it is important first to

examine the literature on first generation college students. Three primary areas of research surrounding first generation student outcomes will be discussed: (a) background or precollege characteristics (e.g. ethnicity); (b) college access (e.g., high school to college transition); and (c) postsecondary educational attainment (e.g., academic aspirations).

Precollege characteristics

First Generation Status. First generation (FG) status has been operationalized as students who are the first in their family to enroll in college where no parents have obtained a Bachelor's degree (Choy, 2001). Students who are first in their families to attend college are in greater danger of stopping out (departure from college with the intent of returning), dropping out, or failing out of college (Pizzolato, 2004; Terezini, Cabrera, & Bernal, 2001; Tinto, 2003) due to poor college academic achievement and psychosocial adjustment. Investigating the effects of first generation status on academic attainment, researchers have associated FG status with a host of disadvantages, including decreased college access, lower socioeconomic status, ethnic minority group membership, lower self-esteem, and poorer high school preparation (Dennis, Phinney, & Chuateco, 2005; Hertel, 2002; Horn & Premo, 1995).

The profile of a first generation student is multifaceted. Engle and Tinto (2008) have demographically described the FG students in this way: they are more likely to be older than traditionally aged college students (18-22), female, a non-native English speaker and non-citizen, financially independent from their parents, a single parent or to have dependent children; have earned a General Education Development (GED) or high

school equivalency diploma; and, come from an ethnic minority background. First generation students' precollege barriers are plentiful and significant, often complicating the likelihood of positive academic outcomes.

Ethnicity. Ethnic minority students comprise a disproportionately high percentage of FG students (Chen, 2005). Now more than ever, African American and Hispanic students are likely to enroll in college, which marks a shift in college enrollment trends (Contreras & Gandara, in press). When these students do enroll in college, however, they are also more likely to enroll in less prestigious colleges or community colleges (as opposed to four-year institutions) when compared to Caucasian students (Contreras & Gandara, in press; Karen, 2002). Finally, retention research shows that African American and Hispanic students are more likely to dropout of college (Seidman, 2005).

To be clear, ethnic minority status in and of itself does not have a direct relationship on college outcomes; however, the interaction of ethnic minority status and other factors affecting college outcomes can be problematic. Research has shown that ethnic minority students experience greater challenges in terms of familial interdependence (Tseng, 2004), college adjustment (Fischer, 2007), isolation (Richardson & Skinner, 1992), social support (Dennis, Phinney, & Chuateco, 2005), academic aspirations (Martinez, Sher, Krull, & Wood, 2009), psychological well-being (Bowman, 2010), and stereotype threat (Steele & Aronson, 1995), all of which impact college outcomes. To demonstrate how problematic it can be as an ethnic minority college student, one FG student wondered if her instructor "singled [her] out" for being Mexican by giving her a bad grade. When she inquired if this was the case, her instructor simply

replied that the student did not meet the expectations for the class (Collier & Morgan, 2008). Students from ethnic minority groups face many challenges, ranging from limited precollege resources to college adjustment. Compounding the problem is the fact that the majority of first generation students who are ethnic minorities have been found to be from families with low socioeconomic status (SES; Bui, 2002).

Socioeconomic Status.

Lack of financial resources spanning several generations in a family could be one reason that first generation students' parents may not have been able to attend college. In one study comparing first generation to non-first generation students, first generation students were grossly underrepresented in the highest socioeconomic income bracket (only 4.8 % of students in the bracket were first generation) and overrepresented in the lowest income bracket (39.6 % were first generation students) (Cho, Hudley, Lee, Barry & Kelly, 2008). Due to their disenfranchised socioeconomic position, first generation students often need to be employed throughout their college career beyond the typical side jobs many students hold to supplement their income (Horn & Premo, 1995). Holding a full-time job while concurrently enrolled in college, however, has been found to significantly comprimse college persistence for FG students (Somers, Woodhouse, & Cofer, 2004), taking valuable time away from studies and opportunities to connect with other college students (Penrose, 2002).

Another feature of the college experience that may differentially impact FG students is the financial aid process. College is becoming increasingly more expensive, which has required students to borrow, on average, $9,100 in aid and loans for the 2007-

2008 school year to pay for tuition, housing, books, and supplies (NCES, 2009). Complicating an already difficult experience of college access, first generation students have been found to be averse to applying for and accepting financial aid loans to help fund their college education (Somers, Woodhouse, & Cofer, 2004). In these scenarios, students will likely end up working more hours to pay for college, creating significant stress and increasing barriers to educational attainment. Additionally, FG students interested in applying for financial aid may not have parents able to assist them throughout this process (Horn & Nunez, 2000). For students from ethnic minority backgrounds with low family income and support, the added stress of FG status could significantly exacerbate the threat to educational attainment (Pascarella, Pierson, Wolinak, & Terezini, 2004). Socioeconomic status is just one of many areas to consider when examining reasons why first generation students struggle in college. In their longitudinal study spanning seven decades of data from the National Longitudinal Surveys of Youth database, Bailey and Dynarski (2011) uncovered a strong relationship between college persistence and family income. In the current study, estimated family income was used to represent students' socioeconomic status in the current study.

Parental Support for Learning.

Academic socialization refers to the ways in which parents, educators, and society communicate their opinions, expectations, goals, and beliefs about students' academic ability, and the degree to which they provide support for student learning (Taylor, Clayton, & Rowly, 2004). Parental academic socialization encompasses the learning beliefs and behaviors parents foster in the home and at school. In their meta-analysis on

parental involvement and student academic achievement, Fan and Chen (2001) found that parental aspirations and expectations for education were the strongest predictor of student academic achievement. Whereas some FG parents communicate their support for college enrollment, others do not, which may help explain the discrepancy in FG and non-FG student college performance and educational attainment (Fan & Chen, 2001). As one first generation student revealed, "Well... everyone told me I couldn't. Oh, why do you want to go to college? We don't have the money for it.... When I go back home, my mom always says I think I'm better than everybody else" (Olive, 2008, p. 104).

Some parents of first generation college students may also not understand the college application, enrollment, or matriculation processes as they have not attended themselves (McCarron & Inkelas, 2006). FG students' parents have tended to be less able to offer reinforcement for college enrollment in the form of college application completion and support for navigating the complicated financial aid process (Horn & Nunez, 2000). This can induce anxiety in students left to complete these complicated processes on their own. Unfortunately, these barriers are not the only obstacles first generation students face.

College Access

Academic Preparation.

First-generation status has been found to occur concomitantly with poor academic preparedness and limited access to secondary and post-secondary resources; these characteristics have been particularly detrimental for college achievement (Horn & Chen, 1998; Perez, 1998; Perna, 2000). In one qualitative study, a first generation student

reported: “I didn’t know how to get [to college] or what I needed to do, and [my parents] were not so helpful in that area because they didn’t know either, so it’s kind of been learn by trial and error” (Byrd & MacDonald, 2005, p. 32). Based on this lack of information, college options may be limited (Engle, 2007), increasing the likelihood of FG students enrolling in a less competitive institution.

Another reason FG students might be academically underprepared is because these students have been shown to take less rigorous high school coursework (Chen, 2005). Recent research has shown that students from low SES backgrounds are taking easier high school courses to earn higher grades (Burley, Butner, Anderson & Siwatu, 2009). Accordingly, Ziomek and Svec (1997) observed an interaction between poverty and grade inflation. Their study compared students from public schools with 75% of students receiving free or reduced lunch to students from more affluent areas. Examining core subject achievement outcomes, the researchers found that students from lower SES schools who earned A’s were demonstrating the same knowledge attainment as students from higher SES backgrounds who earned C’s and D’s. Students from low-income areas may be unknowingly underprepared for more challenging college-level coursework even though they had high secondary academic outcomes.

Additionally FG students tend to be less engaged in high school (Terezini et al., 1996), being less likely to cultivate relationships with peers and teachers. This is particularly problematic when comprehension problems arise as students may be less inclined to seek help from a trusted network of peers and teachers, confounded by the fact that these students may not have a trusted network of support in the first place. Poor

learning habits could carry over from high school classes to college courses where, for example, seeking help is not a common practice (Choy, 2001; Oliverez & Tierney, 2005). Conversely, for FG students who do seek help, issues of limited access and insufficient resources could arise, and students may lack adequate support. Subsequently, students can become frustrated quickly and consider dropping out of college in order to avoid its difficulty. Insufficient college preparation can certainly be problematic for future college success, especially when paired with other obstacles (i.e., poor help-seeking behaviors) (Zalaquett, 1999).

Educational Attainment

Academic Performance.

Although it is important to understand the origins of first generation students' struggles, this study focused on specific college learning beliefs and processes that impact first generation student success. Academic performance during college directly impacts the likelihood of degree completion. Consistently, research has shown that FG students have lower college GPAs and are at higher risk for non-retention than non-FG students (Chen, 2005; Ting, 2003). Specifically, Chen's (2005) National Center for Education Statistics (NCES) report investigated first generation student outcomes and reported that FG students had lower GPAs (2.5 out of 4.0) than non-FG students (2.8 out of 4.0) (Chen, 2005).

Earning disappointing grades can quickly impact a student's motivation for persisting in college, especially when low grades are coupled with the myriad of contextual challenges FG students face. Moreover, threats to college investment (depicted

through students' values, effort, buy-in, and purpose) may be exacerbated by non-strategic learning beliefs and processes, including poor affective self-regulation and low motivation for goal completion. This next section will be aimed at understanding motivational and affective concepts within the Model of Strategic Learning to help identify areas where FG students may encounter difficulty as they cope with their poor college performance.

THEORETICAL UNDERSTANDING OF POOR COLLEGE ACHIEVEMENT FOR FIRST GENERATION STUDENTS

As previously discussed, research on postsecondary learning has identified a variety of explanations underlying poor student achievement for first generation students. While precollege characteristics cannot be altered, it is critical for educators to focus on changeable aspects of the learning environment so that first generation students have the greatest access to their educational and occupational aspirations.

One important area of focus is on the motivational and affective variables impacting FG students' learning experiences (Majer, 2009). These variables are subsumed in Weinstein's (2007) Model of Strategic Learning where strategic learning pertains to students' self-regulation of thoughts, behaviors, attitudes, and emotions about learning, as well as the integration of strategies that promote efficient and effective processing of information (Weinstein, Tomberlin, Julie, & Kim, 2004).

The Model of Strategic Learning

The Model of Strategic Learning (MSL) is a comprehensive summation of the controllable and uncontrollable factors that contribute to students' successful learning

experiences. The three interactive components of skill, will, and self-regulation are located in the controllable portion of the model; the academic environment (i.e., teachers' expectations and nature of the academic task) surrounds the model and describes the uncontrollable features of college learning. The learner is situated at the center of the model and encompasses unique strengths, weaknesses, and prior experiences in learning.

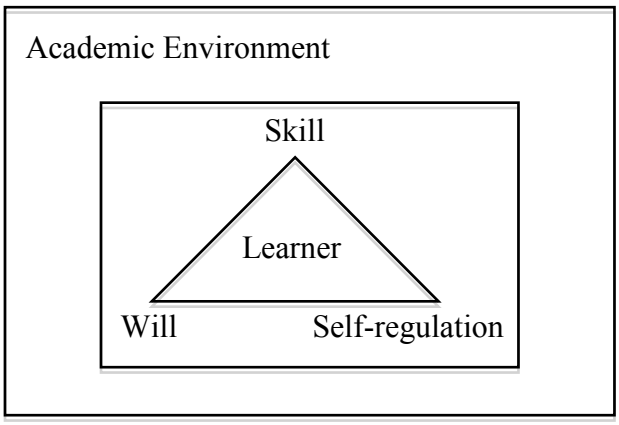

Figure 1. A diagram of the Model of Strategic Learning (see Weinstein, 2007)

Strategic learning is important because it allows students to be effective and efficient in the use of strategies and resources aiding in learning. As previously discussed, some FG students adopt non-strategic learning beliefs and are unable to incorporate more strategic behaviors without assistance (Yazdjian, Toews, Sevin, & Purswell, 2008). In a qualitative study examining the ways in which college students define academic success, differences between first and non-first generation college students emerged. One first generation student had this response about adapting to the needs of college learning:

> "... the classes are getting harder and harder, and I've never really studied before, so I don't really know what I'm doing. I just sort of open a book, and I skim through, and I get bored, and I go do something. So it's not cutting it like it used to. I need to get on that" (Yazdjian, Toews, Sevin, & Purswell, 2008, p. 148).

This quote underscores the formidable challenge some first generation students face in their adjustment from high school to college learning, especially if they adopted poor learning strategies during high school. Then, it is important to locate which features of students' learning behaviors might become problematic for future learning tasks. To this end, each of the controllable areas of the Model of Strategic Learning will next be reviewed.

Skill.

The *skill* component of the Model of Strategic Learning (MSL) is summarized as students knowing what to do to be successful and how to do it. *Skill* topics are typified by the degree to which a student makes information meaningful and includes knowing how to take effective notes or how to strategically prepare for an exam (Weinstein, 2007). For example, in an instance where a first generation student did not know what to do to be successful, the student reported looking for tips on how to takes notes in the syllabi for their courses (Collier & Morgan, 2008). Poor academic preparation for college may especially impact students' strategic learning skills, such as reading comprehension and selecting main ideas. The interactive, emergent nature of the MSL is such that issues in students' *skills* will invariably influence students' *will* and *self-regulation* for academic success (Weinstein, 2007). For example, poor information processing skills may impact

students' motivation to study for exams and their ability (and interest) to self-test when studying exam content.

Self-Regulation.

According to the Model of Strategic Learning, once an individual assesses their *skills* as a learner they must seek to manage, or *self-regulate*, their learning behaviors. For example, students who wish to evaluate their progress toward a goal might engage in a process of awareness, reflection, and control of their own behaviors to better understand themselves as a learner. Research has found that FG students have less ability to recognize expectations of their learning environment (Collier & Morgan, 2008). FG students' subsequent poor adaptation and adjustment may be one reason why they face greater challenges in college. Misunderstanding instructor expectations in the form of tacit or implied knowledge is one area where FG students face particular challenges. Collier and Morgan (2008) write:

> For example, a first-generation student or a student who has recently transferred from a two-year college to a four-year university may be unprepared when the expectations for written work go beyond good grammar to require the appropriate use of sources in addition. Similarly, such students may encounter difficulties when their professors expect them to demonstrate 'critical thinking' rather than simply presenting logically consistent arguments. (p. 429)

Students' *skills* and *self-regulation* for learning are contingent upon their academic *will*, or desire to be successful and setting goals supporting their success. W*ill* is the primary

focus of this study and an in-depth examination of will-based topics will be presented next.

Will.

In the MSL, *will* refers to wanting to do what is necessary to become a more strategic learner and setting goals that support learning efforts. Alternatively, *will* can be depicted as the ways in which students' beliefs and emotions about learning impact their goals, attitude, and motivation. There is a compelling body of research investigating the relationship between will-based topics and performance (Bandura, 1986; Dweck, 1986; Grant, 2004; Pajares, 2002) which finds that the link is bi-directional; as will impacts performance so too does performance impact will (Bandura, 1986). For instance, motivation for learning can impact achievement, as one's goals for a college course influence effort, time, persistence through challenge, and dedication towards overall achievement. Moreover, previous achievement may enhance or detract from a student's motivation for learning. In light of this relationship, FG students coping with academic failure will be analyzed through: motivation, achievement goal orientation, implicit theories of intelligence, academic self-efficacy, anxiety, and fear of failure.

Motivation. Motivation is conceptualized as a driving force towards goal achievement (Schunk, 1990) and includes initiation of, persistence towards, and level of difficulty surrounding a goal (Dweck & Elliot, 1983). Motivation has been strongly associated with achievement (e.g., Bandura, 1986; Pajares, 2002); however different types of motivation underlie an individual's impetus for action. Students' motivation can fall along the intrinsic to extrinsic continuum depending on the locus of their drive.

Intrinsic motivation describes an internal value for a task where intrinsically motivated individuals enjoy personal satisfaction from task completion. Intrinsic motivation, however, is contrasted with extrinsic motivation. Extrinsic motivation describes an external value for a task where extrinsically motivated individuals complete tasks based on striving for an external source of reward, recognition, or accomplishment. Situated within Self-Determination Theory (Deci & Ryan, 1985) where individuals need to experience competence, relatedness, and autonomy to be self-determined, Organismic Integration Theory (OIT) has delineated extrinsic motivation into four subsets (integration, identification, introjection, and external regulation). Each of the subsets is contingent upon the origin of the drive and contributes uniquely to a sense of autonomy (Deci & Ryan, 1985). A brief overview will be provided on three of the four extrinsic types of motivation adding to the previously discussed intrinsic motivation, as these constructs will be measured in this study.

Beginning with the least autonomous form of extrinsic motivation, *external regulation* refers to an entirely separate source of drive outside of the individual such as punishments and rewards. Individuals may pair negative associations with the task because they could experience an overall lack of control in their outcomes. The next form of regulation including slightly more autonomy is introjected regulation. *Introjected regulation* relies on the approval of others to inspire motivation and is most closely related to ego protection. This form of regulation seems most linked to preserving an individual's self-esteem, a construct that has been used to contrast a number of the learning variables in this study. Thirdly, while classified under extrinsic motivation,

identified regulation refers to an internalization of value for the task where the individual has identified with the rationale for completing the task. Although not measured in this study, the final source of motivation is *amotivation* resulting from low value for a task and low competence for expected success in the task. While amotivation, external and introjected regulation have been shown to negatively impact academic outcomes, identified regulation has been found to be helpful for students who find tasks dull but can ultimately value them for their importance (Reeve, Deci, & Ryan, 2004)

When thinking about autonomy related specifically to first generation (FG) students, one issue they experience is feeling indebted to external sources such as family, friends, and their community who may have certain expectations for them as they navigate their college experiences (Olive, 2008). These expectations could be communicated in a number of ways (critical and discouraging, supportive and encouraging) and may add pressure to an already challenging and stressful situation. Situations like these may contribute to less adaptive forms of motivation, detracting from the possibility of a more autonomous experience of college (introjection, external, or even amotivation). This is can be particularly detrimental for FG students as Prospero and Vohra-Gupta (2007) found that intrinsic motivation was one of the most important factors related to FG students' academic success.

Still, motivation is hypothesized to be a state, as opposed to trait, so individuals can be simultaneously intrinsically and extrinsically motivated for different tasks. For example, an intrinsically motivated student may be genuinely interested in understanding a challenging academic topic (i.e., physics) even in the face of earning mediocre grades.

The student will continue to pursue the task so long as learning is continuing to occur. Conversely, the same student who is extrinsically motivated for another class (i.e., college writing) may become frustrated or even disinterested if they are not earning good grades or garnering recognition and praise from others. Learning may become secondary to an individual's primary external interests.

For first generation students who have not struggled academically in high school, receiving poor grades may pose a significant shift in their confidence for learning. Even for FG students who were once intrinsically engaged in learning tasks for the pure enjoyment of learning, limited intrinsic motivation for college learning may create over-concern with performance, as students could see no reason to actually deepen their knowledge base; instead, they are motivated to get the grade no matter what. This is another demonstration of the bidirectional relationship between motivation and achievement: FG students may become extrinsically motivated to achieve in college when they become overly concerned with grades as a result of failure, and extrinsic motivation for learning may overemphasize grades, increasing an individual's fear of failure for learning. To this end, research has found a link between extrinsically motivated FG students and lower grade point averages (Prospero & Vohra-Gupta, 2007). Students who become extrinsically motivated to learn may also experience changes in other motivational constructs such as goal orientation. To illustrate this, motivation for goal achievement will be further elaborated upon with discussions of goal orientation, implicit theories of intelligence, and self-efficacy.

Goal Orientation. Researchers have examined how intrinsic and extrinsic motivation manifest in terms of achievement goal orientation, making distinctions between learning or mastery goals and achievement or performance goals (Ames & Archer, 1988; Dweck, 1986). *Mastery goal orientation* has been hypothesized to describe students who pursue learning for the intrinsic value of the activity. Mastery oriented learners are not concerned with performance, rather they are motivated by learning and seek to understand concepts so that they will be able to complete the academic activities on their own. On the other hand, performance-oriented students are concerned with how their competence will be perceived by others. Performance-oriented learners pursue tasks with emphasis on the outcome or grade earned. Learning is not as critical for performance learners who may be satisfied with demonstrating their knowledge to earn notoriety or recognition.

Normative goal theory examines differences between students who exhibit mastery goals versus those who exhibit performance goals. For example, Ames and Archer (1988) found that students with a mastery goal orientation were more like to make attributions for academic success based on effort instead of ability, and Roeser, Midgley, and Urdan (1996) found that mastery orientations were associated with increased academic self-efficacy. Grant (2004) studied the relationship between goal orientation and self-regulation strategies and found that mastery orientations were linked with deeper learning strategies and increased stress management.

Conversely, performance goal orientations have been linked to avoidant help-seeking behaviors (Ryan & Pintrich, 1997) and use of shallow or surface-level learning

strategies (Greene & Miller, 1996). Research has further classified performance goals into performance-approach and performance-avoidance (Elliot & Harackiewicz, 1996; Elliot & Dweck, 1988). Students who adopt *performance-approach goal orientations* focus on the attainment of normative competence, whereas students who adopt *performance-avoidance goals* are concerned about avoidance of normative incompetence (Elliot, 2005). Students adopting a performance-approach orientation are motivated by an evaluative component and pursue tasks where the chance of success is high. Performance-avoidant students fear failure and will turn away from tasks where opportunities for failing are present.

At one time, it was thought strategic learning only included a mastery goal orientation approach, but there has been a recent shift to reconsider goal theory, examining the previously hypothesized deleterious effects of performance goal orientation (task pursuit based on evaluation) to acknowledge the benefits of a performance-approach orientation (Harackiewicz, Pintrich, Barron, Elliot, & Thrash, 2002). In an academic context, a performance-approach goal orientation describes a student's motivation for a task driven by a desired perception of competence by their peers and instructors. For example, a student exhibiting a performance-approach goal orientation may choose to write a research paper on the topic with which he or she is most familiar and most confident of a positive outcome so as to impress teachers and peers.

In contrast, a student adopting a performance-avoidance goal orientation seeks to avoid perceived incompetence by others, so any activity that threatens a student's

competence may be circumvented or avoided. To borrow from the previous example, the same student concerned with competence may not complete the research paper assignment at all if he or she is confused about the assignment or unsure about the outcome because a failing grade without effort may be better than a poor grade on an attempt at completing the assignment. As previously mentioned, performance goals were formerly discouraged because they were though to detract from an intrinsic interest in a task but there may be a paradigm shift in goal theory. Thus, while a performance-avoidance orientation seems to have its drawbacks (as students feel unsafe about making mistakes and therefore avoid tasks), a performance-approach orientation may have some benefits for students.

Harackiewicz et al. (2002) endorses a multiple goal perspective where pursuing mastery and performance-approach goals simultaneously could promote optimal motivation. The researchers argue that the need for achievement helps decide whether an individual should choose a mastery or performance-approach goal for the task at hand. At times it may be strategic to adopt a performance-approach orientation, since demonstrating competence (and not appearing incompetent) could be beneficial for some tasks (i.e., preparing for exams) whereas a mastery mindset may be more appropriate for other tasks (i.e., reading for a class) (Harackiewicz et al., 2002). Prospero and Vohra-Gupta echoed the need for a multiple goal orientation approach in their 2007 study, suggesting that first generation students who can incorporate joy for learning (intrinsic or mastery orientation) and gain awareness of motivating outcomes such as rewards (extrinsic or performance orientation) in their pursuit of college learning may be more

likely to earn a degree. Goal orientation is linked to other motivational theories related to academic achievement, such as implicit theories of intelligence (Dweck & Leggett, 1988). Research has found that mastery goals are connected to an incremental (growth) theory of intelligence, and performance goals to an entity (fixed) theory of intelligence.

Implicit Theories of Intelligence. The debate of fixed versus malleable intelligence is one of the most salient topics discussed in learning frameworks courses for students experiencing academic challenges. Dweck (1975) asserted that performance is related to a student's mindset, or the implicit beliefs individuals possess about their abilities informed by their understanding of intelligence. This concept is often examined by asking students if they believe their achievement is a function of ability or effort. When students believe that intelligence can be developed through effort, they are said to subscribe to an incremental (growth) theory of intelligence. Conversely, an entity (fixed) theory of intelligence is illustrated when students attribute intelligence to a fixed trait that cannot be controlled or improved through hard work (Dweck, Chiu, & Hong, 1995).

Research has found instruction concerning growth mindset or theory of intelligence in an academically high-risk student population led to increased effort, a latent variable measured by academic discipline, academic self-confidence, commitment to college, general determination, goal striving, and study skills (Sriram, 2010). That is, when students believed their intelligence could be altered, they were willing to invest more effort in the task. Students ascribing or crediting effort for task outcomes are said to subscribe to a growth mindset. Adopting growth mindsets are particularly important for FG students who may not connect time and effort spent on a task with task outcomes.

Given that first generation students are more likely to have poor high school preparation (Chen, 2005), they may not be aware that college success for most students is contingent upon effort (Collier & Morgan, 2008) and subscribe to a *fixed theory of intelligence*.

A student's theory of intelligence has been linked with achievement motivation (Elliot & Dweck, 1988), goal setting (Robins & Pals, 2002), and help-seeking behavior (Hong et al., 1999). In a longitudinal study following college students through all four years of their academic careers, Robins and Pals (2002) showed an incremental theory of intelligence was predictive of mastery orientation responses towards learning ("When something I am studying is difficult, I try harder") whereas an entity theory of intelligence was predictive of responses that were helpless in nature ("When I fail to understand something, I become discouraged to the point of wanting to give up") (pp. 320-321). According to Dweck & Molden (2005):

> We see the way in which believing in fixed attributes leads people to become highly concerned (sometimes over-concerned) with measuring those attributes, often to the detriment of their learning. It leads people to interpret setbacks as a reflection of their underlying competence and to show defensive or ineffective self-regulatory strategies in the face of threat. In contrast, we see how believing in malleable attributes lead people to place a priority on learning and self-development, to interpret setbacks as a reflection of their effort or learning strategies, and to mobilize effective self-regulatory strategies in the face of threat. (p. 124)

Students adopting a fixed mindset, or the belief that their performance is a function of their ability rather than their effort, may become performance-avoidant towards tasks, choosing tasks (i.e. college courses or majors) with the least likelihood of failure. When students in a fixed mindset are required to engage in tasks for which they have low self-efficacy, they may become increasingly anxious and even fearful of outcomes they perceive they cannot control.

Academic Self-efficacy. "The beliefs that individuals create and develop and hold to be true about themselves form the very foundation of human agency and are vital forces in their success or failure in all endeavors" (Pajares, 2002, p. 2). When there is evidence of introspection or ability self-appraisal, these beliefs permeate behavior and subsequently impact performance. Self-efficacy is a known predictor of achievement, and it refers to individuals' assessments of their capabilities to demonstrate competence in a given arena (Bandura, 1986, 1997; Pajares & Miller, 1994). Regardless of what may actually be true about an individual's capabilities in a given academic subject, equally as important in their ability to perform are the self-beliefs they hold about their abilities. Self-efficacy is a subset of a larger framework known as social cognitive theory. In 1986, Bandura posited social cognitive theory, which states that human agency, an intentional and proactive construct, guides the exertion of control and decision-making based on self-appraised abilities and sense of purpose. Social cognitive theory highlights the reciprocal relationship where humans' behavior both shapes and is shaped by one's environment (Bandura, 2001). Self-regulation is the integrated product of these personal, behavioral, and environmental factors (Zimmerman, 2000). Self-efficacy beliefs, then,

are manifested from the behavioral cues and decision-making processes derived from this interplay.

Prior mastery experiences with learning tasks have been found to be a highly influential source of academic self-efficacy (Usher & Pajares, 2008). High school preparation, coursework, and grades are forms of mastery experiences contributing to first generation college students' self-efficacy. Pizzolato (2004) discovered poor high school preparation for FG students leads to low self-efficacy for college learning while enrolled in college, even if students did not previously experience issues with academic competence. One of her participants revealed: "I never even heard of these people or these things, and people are just talking about them so fluently, I feel so left out. And I'm not stupid, but I've felt that way a lot in class" (p. 431). Low self-efficacy might cloud academic aspirations for FG students, where clearly stated academic goals are altered with negative experiences. Students will then attribute performance outcomes to factors that are malleable (i.e., effort) or static (i.e., ability). These explanations for achievement can differentiate a student's perceived locus of control for academic outcomes and the amount of effort an individual is willing to exert given the credited source of the outcome.

The relationship between academic self-efficacy and performance is well-documented in the literature, where positive self-efficacy beliefs have been correlated with higher performance outcomes (Bong, 1997; Pajares & Miller, 1994; Pietsch, Walker, & Chapman, 2003). Self-efficacy is considered to be a multi-dimensional construct so that individuals can have varying degrees of self-efficacy that are task- or

domain-specific. As such, these beliefs have been found to contribute to choice of difficulty level of educational courses (Pajares, 1996; Zimmerman, Bandura, & Martinez-Pons, 1992).

Academic self-efficacy has also been examined as a motivational tool in higher education, where students' college achievement goals based on their self-efficacy beliefs positively predicted their college retention (Robbins et al., 2004). Students may use self-efficacy as a vehicle to make decisions about their academic careers regarding goal setting, academic track or major, and intellectual effort (Bandura, 1986, 1997; Rau & Heyl, 1990; Schunk, 1995). Majer (2009) reported self-efficacy as one of the strongest predictors of college GPA for first generation students. Given the wide net it casts, college personnel could use academic self-efficacy to help students persist through difficult tasks and maintain college enrollment (DeWitz, Woolsey, & Walsh, 2009).

Academic Anxiety. Prior research has examined the role of affect, or emotions towards learning, on academic achievement (Turner, Husman, & Schallert, 2002). According to Csikszentmihalyi (1990), an optimal state of arousal termed "flow" occurs when energy is focused and students are fully engaged in a task. If the task does not present a certain level of challenge, student boredom and lack of concentration may result. On the other hand, if the task is too challenging, students may experience anxiety and worry. While some degree of academic stress can indicate a healthy interest in the task and a response to appropriate task difficulty, many students experience overwhelming amounts of anxiety that ultimately impact their performance. These emotional responses may be even more impactful for high-risk students, who may

already be primed to be fearful of high-level academic tasks. In an academic context, anxiety is related to a threat of evaluation (Martin & Marsh, 2008), such as those worries students experience when taking exams, giving presentations, or writing research papers. To reduce the deleterious effects of anxiety on performance, anxiety requires management through a process of awareness, reflection, and control for students to analyze how their affective reactions to learning are manifesting and hindering their performance.

In the domain of math, for instance, anxiety has been investigated for its demotivational, debilitating effects on math performance and cognition, negative affect, and physiological responses (Cates & Rhymer, 2003; Higbee & Thomas, 1999; Ma & Xu, 2004; Martin & Marsh, 2008). Ashcraft and Moore (2009) refer to these debilitating effects as "an *affective drop*, a drop in performance that can be attributed to math anxiety independent of the individual's competence or achievement in math" (p. 201). This study, it should be noted, will focus on academic anxiety, discussed in terms of its negative emotional impact on learning. Fear of failure is another affective response to learning that can have detrimental consequences on learning outcomes if not carefully addressed.

Fear of Failure. Fear of failure describes an individual who is so concerned with not doing well on tasks that he or she may not try as hard, may convince themselves they do not value the task, or may become very anxious when attempting the task even though, paradoxically, all of these beliefs may eventually lead to failure. A fear of failure may propel students into action, helping them conceptualize themselves as vulnerable to

unfavorable outcomes and therefore preparing accordingly with increased effort. Conversely, students with high fear of failure may cultivate a greater degree of anxiety—even to the extent they develop learned helplessness, where individuals could avoid unpleasant situations but perceive they cannot (Martin & Marsh, 2003). In Collier and Morgan's (2008) qualitative study examining how FG students navigate instructor expectations, one student revealed:

> One big problem I had at that time was I was never able to face an instructor. I was never able to come to see her after the class, or actually go to the office to meet with the instructor, I was afraid, I don't know why. It was silly, but I was afraid, new to the authority, she was always dressed in a suit, and dressed nice. The fact is, I never came to see her... (p. 440)

This student went on to receive a second failing grade on her next paper.

Fear of academic failure is often seen in students' self-talk as they try to rationalize reasons for their poor effort on tasks. Dweck (2007) offered this example of self-talk: "Who cares about this stuff? It's for nerds. I could do it if I wanted to, but it's so boring. You don't see CEOs and sports stars solving for *x* and *y*" (p. 2). Overemphasis on failure may overshadow an individual's intrinsic motivation and joy for learning; instead, individuals become extrinsically motivated to perform (increased emphasis on grades or other external benefits rather than mastery of the content) and avoid failure (Elliot & Harackiewicz, 1996; Linnenbrink & Pintrich, 2002). Extrinsic motivation can pose a challenge related to fear of failure because an individual could become overly preoccupied with grades, thereby increasing anxiety for the task. Increases in anxiety

could incidentally yield increases in one's fear of failure, and this might render a student unable to perform as well as they could if they were relaxed and able to adopt a mindful, balanced way of approaching the task.

There have been several studies dedicated to exploring the interaction between fear of failure and the will-based variables of interest to the proposed study. Fear of failure has been found to occur concomitantly with low self-efficacy and lack of appropriate goal setting for a task, so individuals who are motivated by fear of failure are less likely to believe they can complete a task and subsequently fail to set and work towards goals pertaining to the task (Caraway, Tucker, Reinke, & Hall, 2003). Fear of failure has also been associated with mastery goals, performance avoidance goals, and performance-approach goals (Neff, Hsieh, & Dejitterat, 2005). Mastery goals are typically considered to be the most positive and adaptive of the three goal orientations based on the strong link to intrinsic motivation. As previously discussed, intrinsic motivation is engagement in a task based on personal joy and fulfillment. Then, individuals who have a mastery goal orientation and who are intrinsically motivation have been found to have less fear of failure (Neff et al., 2005). A mastery goal orientation describes an individual who is motivated by curiosity and learning for personal growth, and may see failure as an opportunity to learn and grow (rather than something to be avoided at all costs).

Fear of failure has also been associated to the two performance orientations: performance-approach and performance-avoidance. In general, performance orientations focus on outcome (i.e., the exam grade) instead of process (i.e., learning something new),

so stakes of poor performance are more impactful. As the stakes of failure increase, so too does an individual's fear of failure. Neff et al., (2005) found that fear of failure was positively linked with performance-approach goals, as students who adopted performance-approach goals were more concerned with demonstrating competence (rather than mastery of content). The authors also found fear of failure associated with performance-avoidance goals. This is not surprising, given that a performance-avoidance orientation is defined by activities associated with perceived incompetence that are feared and thus avoided.

Behavior associated with fear of failure is in line with a fixed theory of intelligence (where outcomes are believed to be contingent upon ability rather than effort) (Martin & Marsh, 2003). That is, if students believe they simply do not possess the ability to succeed at a task, they are more likely to be fearful of the task. Crediting poor innate ability as a proxy for achievement can be problematic because students may not realize that achievement is controllable, based on the amount of effort they are willing to put forth and the strategies they select for the task. Thus, a pointed focus on internal, controllable features of learning (i.e., effort rather than ability) enables to students to see learning in light of the personal resources they allot to learning tasks and not a component of their innate ability as learners.

Resilient First Generation Students

As just discussed, researchers have posited a number of demographic, motivational, and affective variables that have been linked to poor academic performance for FG students (Seidman, 2005). Some FG students do not have problematic college

experiences, however, even though they face the same barriers as their first generation peers. What makes some first generation students more resilient than others? According to Martin and Marsh (2008) resiliency is defined as the ability for subgroups who experience significant challenges or extreme adversity to bounce back and recover from life's hardships. The authors go on to explain that academic resilience is the ability for these populations to re-engage after experiencing academic disappointment (such as earning bad grades). So, although many first generation students encounter similar contextual challenges and exhibit the same types of non-strategic learning beliefs and processes prior to college, there is a subset of them who succeed. What might be helping to enable this success?

Certain self-attitudes have been found to buffer against maladaptive learning beliefs and cognitive processes. Some students cope with failure by using it as a learning experience, looking to locate areas for improvement and seeking the help of available support systems (Karabenick & Knapp, 1991). When external sources of support are not available, however, a circumstance often faced by FG students, those individuals with internal support mechanisms may be more likely to cope with failure in an adaptive manner. Examining high-risk students, Clark (2005) indicated that "students need to know how to self-nurture and/or receive nurturing from others" (p. 298) in order to be successful in college. Self-nurturing could be especially beneficial when coping with perceived or actual poor grades, especially for FG students who have been found to have lower self-acceptance and poorer psychological well-being (Bowman, 2010). Negative academic experiences may lead FG students with lower self-acceptance and poorer

psychological well-being to "wonder whether something is wrong with them" and why they are unable to master their college coursework (Bowman, 2010, p. 194). In these instances, students could benefit from a form of self-nurturing through realizing that sometimes, all college students struggle. Instead of harshly criticizing oneself up when earning a poor grade with internal dialogues such as "Way to go, idiot. Looks like you're not going to make it in college", a student could offer themselves comfort "Hey, this class is really hard, and I am trying my best. I may need to ask the TA for help". Failure is an opportunity to learn and gain clarity on concepts, but this can be overlooked if individuals are too caught up in self-judgment and feelings of inadequacy (Neff et al., 2005). Examining one's learning strategies, beliefs, and processes towards college learning in a non-judgmental way may illuminate areas for growth and help students realize where they can improve. For this reason, the construct of self-compassion may be relevant to understanding why some first generation students fare better than others in their college experience.

Self-compassion

Stemming from the Buddhist principle of compassion, or extending caring concern to another who is suffering, self-compassion refers to the ability to offer care and concern to oneself as we experience personal challenges. Put simply, when confronted with personal disappointment through our mistakes, failures, and inadequacies, self-compassion offers the warmth, understanding, and balance needed to ease the pain of our suffering (Neff, 2011). Neff (2003b) has operationalized self-compassion to consist of three interactive components: (a) self-kindness versus self-judgment; (b) common

humanity versus isolation, and (c) mindfulness versus over-identification. Self-compassion is the product of these three interrelated tenets, suggesting that self-kindness, common humanity, and mindfulness reinforce and strengthen each other (Neff, 2003a).

The first of the three main tenets of self-compassion is self-kindness. Self-kindness entails offering understanding towards oneself, desiring the self's well-being, and taking a nonjudgmental attitude towards one's inadequacies and failures. This warmth and support towards the self is in contrast to global, negative self-judgment or harsh criticism ("I am clearly incompetent") when dealing with undesirable outcomes. The distinction between self-kindness and self-judgment is depicted in the contrasting self-talk: "I made a poor decision" versus "I am stupid", where the underlying tone is that making poor decisions are okay and we all make them from time to time. Self-judgment, on the other hand, is characterized by unrelenting criticism we give ourselves when we experience failure. When individuals can learn to adopt more adaptive self-attitudes that incorporate kindness and care towards the self (Gilbert, Clarke, Kemple, Miles, & Irons, 2004), they can soften harsh feelings of inadequacy through self-soothing. This balance helps to offset or balance negative emotions when coping with personal failure. Self-kindness contributes to an individual's overall self-acceptance, where we are comforted from our failure when we accept the fact that we, as humans, are imperfect (Fredrickson, 2001; Neff & Vonk, 2009).

Common humanity, the second of the three tenets of self-compassion, refers to an individual's perspective when coping with challenging events. Individuals experiencing difficulty in their lives can either feel isolated by the experience, or else feel more

connected to others by remembering that suffering is part of the shared human condition. Those who feel isolated may be taking an egocentric perspective with regard to the failure, flaw, or inadequacy, feeling that somehow everyone else is living a successful life and that failure is somehow an aberration or departure from what's normal. They may ask themselves "why me?" and see failure as a sign of weakness. Instead of isolation, a perspective of common humanity allows individuals to couch their disappointment in light of the human struggle ("we are all in this together"), rather than seeing it as function of their own inadequacies. This helps individuals feel related to others (who also make poor choices from time to time), rather than separate and alone (Kirkpatrick, 2005).

This constructs helps individuals feel related to others (who do make poor choices from time to time), rather than separate and alone (Kirkpatrick, 2005). In sum, common humanity is thought to help "break the cycle of self-absorption" by placing failures in light of a shared experience (Neff, Hsieh, & Dejitterat, 2005, p. 264).

Lastly, mindfulness is the practice of acknowledging one's thoughts and feelings without judgment. Neff (2009) writes:

> While it might seems that personal suffering is blindingly obvious, many people actually don't pause to acknowledge their own pain when they are busy judging themselves or coping with life's challenges. Mindfulness involves a sort of stepping out of oneself, taking a meta-perspective on one's own experience so that it can be considered with greater objectivity and perspective. (pp. 3-4)

Mindfulness helps individuals "increase awareness and respond skillfully to mental processes that contribute to emotional distress and maladaptive behavior" (Bishop, Lau,

Shapiro, Carlson, Anderson, et al., 2004). Increases in mindfulness have been related to positive psychological outcomes such as improved interpersonal skills and stress management techniques (Christopher, Christopher, Dunnagan & Schure, 2006). Without mindfulness, one cannot gain the self-awareness necessary to recognize personal suffering, or challenge critical thoughts. Instead, one might overidentify with negative feelings toward the self, where overidentification describes being "swept up in and carried away by one's story line" (Neff, 2011, p. 4). Mindfulness provides psychological distance from self-pity, a "woe is me" attitude that exaggerates pain (Neff, 2003b). Overidentification with disappointment can lead to rumination on one's negative feelings, reducing the option for an alternative, less judgmental perspective (Bennet-Goleman, 2001). Mindfulness is associated with acceptance and a greater degree of insight so that one is neither ignoring nor ruminating on personal failure (Brown & Ryan, 2003; Neff, 2009).

Self-compassion as a Protective Factor.

Self-compassion is gaining increased attention for its positive associations with psychological well-being (Neff, 2003a; Neely, Schallert, Mohammed, Roberts, & Chen, 2009). Because self-compassion involves giving oneself kindness in the face of hardship, self-compassion can act as a coping mechanism that can help individuals deal with difficulty in their lives (Neff et al., 2005). Self-compassion helps individuals frame disappointment in a healthy way instead of employing harmful coping beliefs and behaviors such as ignoring, avoiding, suppressing, or ruminating about the problem (Neff, 2009). As Neff (2003b) noted: "... remembering that suffering and personal failure

happen to all people helps put one's experience into perspective, also enhancing the ability to be mindful of one's thoughts and emotions and to not over-identify with them" (p. 89).

Neff, Kirkpatrick, and Rude (2007a) examined self-compassion and adaptive psychological functioning with college students. The authors created a mock interview scenario in a laboratory setting and asked students to write about a commonly asked interview question: "What is your greatest weakness?" Students then took measures of self-compassion, anxiety, and other variables. The authors found that self-compassion helped protect against harsh self-evaluative anxiety when students had to reflect on personal weaknesses (Neff et al., 2007). This suggests that individuals who are more self-compassionate take a more balanced approach when examining their own inadequacies and realize that weaknesses (or imperfections) are part of the human condition. Thus, these individuals will experience less anxiety when having to point out their flaws because of their self-compassionate awareness.

Self-compassion has also been found to buffer individuals against negative feelings toward the self when imagining a distressful situation and was found to help individuals take responsibility for past mistakes without ruminating on negative feelings (Leary, Tate, Adams, Allen & Hancock, 2007). Identifying one's role in an undesirable outcome non-judgmentally, helps facilitate self-awareness, and therefore self-change (Sellers, Dochen, & Hodges, 2011).

Self-compassion and Motivation.

Motivation describes an individual's drive towards achieving a goal; this drive can stem from self-compassion or self-criticism. Motivation stemming from self-compassion is based on a genuine interest in reducing personal suffering and doing well, whereas motivation stemming from self-criticism is drive based on avoiding personal failure. Self-critical individuals are more likely to berate themselves when experiencing disappointing outcomes and set goals based on attempts to avoid future failure. Neff et al. (2007) found that self-compassion was associated with greater personal initiative for self-change and self-improvement. Accordingly, self-compassionate individuals do not criticize themselves for mistakes, so it is more likely that they will be open to admitting mistakes and taking on new challenges (Neff, 2009). This openness to new experiences and extension of kindness in the face of undesirable outcomes helps cultivate intrinsic, or internal, sources of motivation such as curiosity and enjoyment. Not surprisingly, self-compassion has been found to be associated with behaviors such as re-engaging in goals after failure (Neely et al., 2009).

Motivation is a general construct, however there are specific applications of it pertaining to learning and academic achievement. Self-compassion has been associated with adaptive academic motivational patterns (Neff et al., 2005), which suggests that self-compassion can be useful in a learning environment because it offers a healthier perspective on achievement. A self-compassionate student may intrinsically strive for achievement because one cares about themselves and wants to do well, not because they

want to avoid failure and therefore escape their own self-criticism, or how the self is judged in reference to one's peer group (Neff, 2009). When one does not earn a desirable academic outcome, self-compassion can offer the perspective of comfort and open the individual up to different interpretations of the event. This might be seen more clearly through an example. Here are two scenarios with parents responding to a child who earned a bad grade:

> *Compassionate parent*: "I see you did not do as well as you wanted to on that test. Learning sometimes requires a little bit more effort or time when material is tricky. How can I support you so that you feel well-prepared for your next test?"
>
> *Non-compassionate parent*: "How could you fail the test? The material is so easy! Boy, you must feel like a real loser compared to your classmates!"

While it is simple to point out the healthiest, most beneficial way to deal with a bad grade in the context of good parenting, many times students coping with undesirable grades choose the latter, more critical self-talk when coping with the event. For first generation college students, this contrast is particularly illuminating. These students are already prone to feel isolated and disconnected (Pizzolato, 2004); a lack of self-compassion for poor academic performance may only exacerbate the issue.

Self-compassionate motivation for achievement can also be differentiated from motivation based on self-indulgence, although sometimes the two have been confused in the literature (Adams & Leary, 2007). While self-indulgence is the intentional pursuit of pleasure without regard to how the behavior may impact an individual's long-term goals, self-compassion is based on the desire to be healthy and happy, and therefore is likely to

lead to behaviors that help reach these goals. An example may help illuminate the differences between the two concepts: a self-indulgent college student with an upcoming final exam may decide to forgo all of the scheduled review sessions to spend time socializing with friends even though he or she set a goal to earn an "A" in the course. This decision runs counter to the goal of earning an "A". Self-compassion is different than self-indulgence because it allows an individual to sit with and examine the consequences of choosing socializing with friends versus studying. Instead of wanting freedom from responsibility, self-compassion helps individuals to take responsibility (Leary et al., 2007).

In sum, self-compassion is the practice of noticing when you are experiencing negative feelings towards yourself and extending feelings of kindness and understanding, as well as placing your suffering in light of the common human experience. Thus, self-compassion enables individuals to be accountable, support themselves emotionally, and cope with failure.

This study examines self-compassion for poor academic performance, and is interested in how participants treat themselves when faced an undesirable academic outcomes. In order to understand how self-compassion is useful in an academic context, the relatively sparse literature on self-compassion and learning will next be reviewed.

Self-compassion and Learning

Negative emotions (i.e., anxiety, depression, shame) about learning interfere with an individual's ability to process information effectively (Wells & Matthews, 1994). For students who may be more prone to academic challenges, negative emotions about

learning (especially regarding a student's sense of competence as a learner) could exacerbate poor coping with academic disappointment (i.e., disengaging from academic or occupational goals) (Karabenick & Knapp, 1991; Turner, Husman, & Schallert, 2002). Self-compassion has been found to be an important coping strategy when dealing with critical self-attitudes (Neff, Kirkpatrick, & Rude, 2007a); however there have been only a few studies that have looked at self-compassion in an academic setting. In the most relevant study to the current proposed investigation, Neff, Hsieh, and Dejitterat, (2005) examined the relationship between self-compassion, achievement goals, and coping with academic failure among college students.

The authors had college students complete a questionnaire measuring self-compassion, achievement goals, fear of failure, perceived competence, intrinsic motivation, and anxiety (Neff et al., 2005). Self-compassion was found to be positively correlated with mastery goals ($r = .28$, $p < .001$) and negatively correlated with performance goals where the strongest correlation was between self-compassion and performance-avoidance orientation ($r = -.29$, $p < .001$). Findings suggest that those with more self-compassion engage in tasks out of interest rather than worrying about performance outcomes (i.e., performance-approach and performance-avoidance). For self-compassionate individuals, a mastery goal orientation means that there may be less concern about the self-esteem protection performance-oriented goal seekers might experience. For mastery goal seekers, failure could be seen as a learning opportunity and helps to point out areas to improve. As such, disappointing outcomes may be met with

kindness and care rather than harsh self-criticism or worry about what others will think of them.

Findings from Neff et al. (2005) also demonstrated a positive relationship between self-compassion and perceived competence ($r = .35$, $p < .001$) and a strong, negative relationship with fear of failure ($r = -.51$, $p < .001$). These results were interpreted to mean that those who are self-compassionate are more likely to experience high self-efficacy because they don't lash themselves with negative self-evaluation. Moreover, knowing that failing will not be met with harsh self-judgment also means individuals are less likely to fear failure. Lastly, perceived competence and fear of failure mediated, or partially explained the relationship between self-compassion and achievement goals. These results mean that self-compassionate individuals were more likely to experience increased perceived competence and more likely to adopt performance-approach goals (potentially so they can demonstrate their greater feelings of competence). Neff et al. (2005) found the positive relationship between self-compassion and performance-approach goals problematic, as concern with outperforming others is not theoretically aligned with self-compassion. Finally, lesser fear of failure for self-compassionate individuals decreased the tendency to adopt both performance-oriented goals as those with more self-compassion are less likely to criticize themselves harshly for not achieving desired outcomes.

Self-compassion has been linked to several motivational and affective variables underlying achievement. In the next section, self-compassion for poor academic

performance will be examined with respect to each of the variables investigated in the proposed study.

Motivation.

Only one study has examined the relationships between intrinsic motivation and self-compassion in learning (Neff, Hsieh, & Dejitterat, 2005). Intrinsic motivation was measured with sample items such as "The reason that I will work to expand my knowledge in my courses is because it's interesting to learn more about the nature of the course topics". Self-compassion was positively correlated with intrinsic motivation (r = .30, $p < .001$). Past research offers additional support for this finding, as self-compassion has also been linked with increased autonomy and self-determination (Neff, 2003a). Self-determination, a motivational theory concerned with supporting intrinsic and some extrinsic tendencies towards growth and fulfillment, entails three interrelated psychological needs: autonomy, competence, and relatedness (Ryan & Deci, 2000). A self-determined student may be highly intrinsically motivated and engaged in an academic task; this motivation allows for increased performance and persistence. This research suggests that self-compassion may be particularly useful in learning contexts.

As stated above, extrinsic and intrinsic motivation can be further delineated into four types of behavioral regulation: external, introjected, identified, and integrated. The current study is assessing three of these four types of regulation (external, introjected, identified), along with intrinsic motivation, adding to the research on self-compassion and motivation.

Goal Orientation.

As previously discussed, Neff et al., (2005) found that self-compassion was linked with mastery goal orientation rather than a performance orientation. Rather than trying to achieve or protect a positive self-image, self-compassionate students focus on the healthy growth involved in mastering desired goals.

For instance, consider an individual tasked with completing a novel learning activity. An individual exhibiting self-compassion during the learning task might refrain from judging themselves too harshly, even if they are not successful at the task. This stance is similar to a mastery goal orientation where students are not preoccupied with outcomes but rather engage in the task for the joy of learning. Alternatively, a student lacking self-compassion may exhibit a performance goal orientation because they evaluate themselves based on how well their performance measured up to their peers' performance. This student may only agree to participate in the task again if they were successful, so as to have another opportunity to demonstrate competence. In the case of failure, the student will likely give up trying. Similarly, a performance-avoidant student will likely turn away from a task where they feared being unsuccessful, so as not to appear incompetent.

Implicit Theories of Intelligence.

While there has been no direct research on the intersection of an individual's theory of intelligence and level of self-compassion, there may be theoretical explanations for why these two constructs should impact each other. As previously discussed, an individual's theory of intelligence can either be fixed (entity), or changeable

(incremental). An incremental mindset has been linked with mastery goal orientation (Hong, Chiu, Dweck, Lin, & Wan, 1999), as participants attributed failure to a function of their effort towards a task and took steps to improve their effort on subsequent tasks. On the other hand, entity theorists are more likely to be ashamed, fearful, and helpless in the face of academic failure. Longitudinally, an entity (fixed) theory of intelligence has also been associated with decreases in self-esteem (r = -.29, p < .05), yielding entity theorists to be more psychologically vulnerable during disappointing outcomes (Robins & Pals, 2002). Then, there is reason to believe those with more self-compassion would be likely to adopt an incremental or growth mindset, as Robins and Pals (2002) point out:

> Incremental theorists demonstrate this mastery orientation because they believe that their ability can improve through effort. Entity theorists, in contrast, are vulnerable to the helpless response pattern. When confronting failure, helpless individuals make maladaptive self- attributions (e.g., "I'm failing because I'm stupid''), experience negative affect, and disengage from the task to avoid revealing their lack of ability. (p. 314)

Academic Self-efficacy.

There have been a few studies investigating the benefits of self-compassion on perceived competence or self-efficacy for college students. As self-efficacy describes an individual's confidence in their ability to successfully complete a task (Bandura, 2001), those who are more self-compassionate may be less likely to criticize themselves when ideal, unrealistic standards are not met (Neff, 2003a). Accordingly, research has linked low self-efficacy and negative, self-conscious emotions such as shame (Turner, Husman,

& Schallert, 2002). Theoretically, because self-compassion includes adopting a balanced, understanding perspective of coping with undesirable situations rather than overidentifying with the outcomes, criticizing themselves, or isolating themselves with the failure, it holds that those who are more self-compassionate are likely to feel better about their abilities overall. Self-compassionate individuals may have a more balanced understanding of their skills as they tend to extend kindness and understanding to themselves when they are unsuccessful; alternatively, when an individual is not self-compassionate, they are self-critical and constantly cutting themselves down. As mentioned above, Neff, Hsieh, and Dejitterat (2005) found that self-compassion was positively correlated with perceived competence (r = .35). This is supported by another study looked at subscales of self-compassion as they related to self-efficacy (Iskender, 2009). These findings empirically support the notion that self-compassionate individuals feel better about their perceived competence in a task because they're not undermining their self-confidence through harsh self-criticism.

Academic Anxiety.

Anxiety is one of the most robust variables linked with self-compassion (Neff, 2009), but only a few studies have looked at academic-specific variations of anxiety and self-compassion. Williams, Stark, and Foster (2008) investigated the relationships among self-compassion, academic motivation anxiety, and procrastination for college students. Academic motivation anxiety was measured on two subscales - academic-related worrying and emotionality (outward expression of emotions). Worry and emotionality were both significantly, negatively correlated with self-compassion. Neff, Hsieh, &

Dejitterat (2005) also found negatively correlated relationship between self-compassion and anxiety (r = -.66, p < .001).

According to the Diagnostic and Statistical Manual, Fourth Edition, Text Revision (DSM-IV-TR), anxiety is defined as excessive worry about a variety of future events. The relationship between self-compassion and anxiety may be due, in part, to the mindful, balanced approach self-compassion offers individuals. An upcoming task, then, may not yield the intense worry it could for an individual with less self-compassion. Even if the self-compassionate individual experiences an undesirable outcome, he or she may be able to see failure experiences as an opportunity to learn and grow instead of emphasizing how failure might reflect on the individual. Less self-compassionate people may attribute that failure to themselves, and may be more inclined to turn inward and accuse themselves of being incompetent. Instead of extending harsh self-treatment when things go awry, disappointing outcomes for self-compassionate individuals are met with self-kindness and care.

Fear of Failure.

Fear of failure has been defined as the irrational fear that we will not succeed (Beery, 1975). There has been only one study examining the link between fear of failure and self-compassion, which is the Neff, Hsieh, and Dejitterat (2005) study described previously. This finding is in line with self-compassion, as individuals who are kinder to themselves in the face of failure are less likely to be fearful of situations that might yield disappointing outcomes. For instance, students may be more open to challenging work that could be riskier for their overall grade in a course if they were if they felt

comfortable with any negative feedback they may receive. They would be able to take a more balanced approach and recognize that poor performance might be a result of the task difficulty, not of their ability as a student.

To summarize the relevant findings of studies on self-compassion and learning, self-compassion has been found to a predictor of college students' overall well-being (Neely et al., 2009; Neff, 2003a; Neff, Kirkpatrick, & Rude, 2007a) and has been positively correlated with academic motivation (Neff, Hsieh, & Dejitterat, 2005), self-efficacy (Iskender, 2009; Neff, Hsieh, & Dejitterat, 2005), and negatively correlated with fear of failure and anxiety (Neff, Hsieh, & Dejitterat, 2005; Williams, Stark & Foster, 2008). The next section will explore the ways in which self-compassion might be useful for first generation students.

Self-compassion and First Generation Students.

First generation (FG) students encounter a myriad of previously addressed contextual variables (i.e., poor secondary preparation, limited access to college) shown to complicate college achievement, but research has found more proximal barriers to college success, such as limited college engagement (i.e., relationships with faculty members, off-campus housing, student interactions) (Pike & Kuh, 2005) and problematic metacognitive learning processes (i.e., goal orientation, perceptions of ability, self-regulation towards learning, and coping strategies) (Williams & Hellman, 2004). Given that FG students are high-risk for college attrition and experience more academic challenges than their non-FG peers (Chen, 2005), they may need different resources to aid in their resilience, respond to their unique challenges, and buffer the achievement

discrepancy. In the face of so many challenges, FG students may begin to feel isolated from other college students and disconnected from helpful resources. If they begin to earn poor grades due to their non-strategic learning beliefs and cognitive processes, first generation students may become more discouraged and doubt their belongingness in college. This might lead to lower levels of self-compassion for poor academic performance for FG students.

Excessive self-blame for academic failure has been found to decrease self-efficacy and reduce intrinsic motivation (Mantzicopoulos, 1997). In light of this, FG students may lose confidence in their learning abilities and interest in the personal enrichment a college degree can afford. Instead, adopting an incremental (fixed) theory of intelligence, they may believe they are simply incapable of learning college material, ruminate and over-identify with poor academic outcomes, and further exacerbate their problems. Because FG students may begin attributing failure to their inherent ability rather than a function of their effort, they could become performance-avoidant and highly afraid of failure, and ultimately fail to recognize the need to seek help.

As discussed, there is some research linking self-compassion variables impacting learning with a traditional college student population (Neff et al., 2005); however there is a gap in the literature regarding research with first generation college students and self-compassion. There is reason to believe that self-compassion can help first generation students reframe the highly evaluative learning environment so that students do not over-identify with poor performance, isolate themselves from peers and faculty members, and ultimately drop-out of college. Self-compassion has been found to be a motivational

force, where setting compassionate goals and expectations for oneself may lead to improved social bonds and enhanced well-being as well decreased loneliness, depression and anxiety (Crocker & Canevello, 2008). Self-compassion has also been named a coping strategy to deal with disappointing events (Neff et al., 2005, 2007) where research has positively linked self-compassion with healthy, adaptive coping beliefs and behaviors (i.e., positive reinterpretation/growth and acceptance) and negatively correlated it with maladaptive coping beliefs and behaviors (i.e., denial, mental disengagement, and the venting of and focusing on negative emotions) (Neff et al., 2005). Finally, self-compassion has been linked with higher academic achievement (Conway, 2007), suggesting that self-compassion may help FG students who struggle with academic achievement. These findings support the importance of examining self-compassion within a high-risk population such as first generation college students to buffer the actual or perceived negative academic outcomes that may differentially impact these students.

Examining dysfunctional beliefs about poor performance (and the practices that tend to generate undesirable academic outcomes), and understanding how they may be serving the hinder one's college learning experience are critical to college achievement. Self-beliefs are particularly important for high-risk college students (Clark, 2005; Padilla, 1997; Pizzolato, 2004) who struggle with a variety of challenges. An examination of self-beliefs for FG students may be most successfully executed with self-compassion where students can adopt healthy self-attitudes to help them cope with these debilitating belief systems.

Self-compassion has been found to have positive effects on the psychological resilience of young adults and college students, experiencing less damaging self-attitudes related to identity development, connection with peers, anxiety, and other psychosocial variables (Neff & McGeehee, 2009). These struggles are similar to those found in the first generation student population. Then, given the unique challenges presented to first generation students, Pizzolato (2004) argued: "persisting students may need to construct and rely on strong, internally defined goals of graduating, high perceptions of academic competence, and an internally defined sense of self [to be successful and stay successful in college]" (p.426). In both college learning and interpersonal realms, harnessing the ability to construct accurate pictures of themselves has been found to facilitate otherwise marginalizing experiences for students at risk for non-retention (Sheilds, 2001).

If constructing accurate self-perceptions is named as a coping strategy for first generation students, it is equally important to ensure that these self-perceptions are interpreted through the lens of self-compassion. Grounded in feelings of "kindness and understanding towards oneself and the recognition of one's common humanity" (Neff, 2003, p. 226), it would appear that employing a sense of self-kindness in an academic context of failure to combat feelings of shame, isolation, self-doubt, fear of failure, and regret through acceptance would prove to be useful long-term mechanism for first generation students coping with chronic academic underachievement.

According to Jehangir (2008):

> Despite all we know about engaging and involving students in learning, many first-generation students do not feel that they have the permission to engage in

their learning authentically as their full selves. This divide between home and school worlds coupled with a sense of marginalization in the curriculum perpetuates the isolation that first-generation, low-income students, many of whom are also students of color and immigrants, feel on campus (p. 34).

Chapter 3: Method

The Current Study

PURPOSE

The purpose of this study was to explore the relationship between first generation students' self-compassion in the face of poor academic performance and motivational and affective learning outcomes (i.e. motivation, goal orientation, implicit theories of intelligence, self-efficacy, anxiety, and fear of failure). When first generation students report self-compassionate views of themselves, they may also report themselves as less isolated in their histories of underperformance and negative academic self-concepts. Theoretically, an FG student with greater self-compassion may demonstrate less disruptive patterns of decision-making (i.e., chronic poor time and anxiety management, inadequate preparation for lectures and exams) than those often exhibited by FG students. Those FG students with self-compassion, moreover, may show a stronger ability to cope with academic failure. Therefore, the contributions of this study are several. First, this study examined self-compassion for poor academic performance, a specific application of a well-researched general construct (see Akin, 2009; Allen & Leary, 2010; Neff, 2011). The study also examined whether there is an association between self-compassion and FG status, extending self-compassion research to a novel population. In addition, the study examined the link between self-compassion and learning outcomes among FG students, while also determining if the Neff, Hseih, and Dejitterat (2005) findings were replicated with non-FG students. Finally, this study examined whether self-compassion for poor performance buffers some of the negative effects of first generation status in terms of learning variables.

Research Questions, Hypotheses, Rationales

The following section presents the research questions that were investigated in order to examine the relationships among self-compassion for poor academic performance, first generation status, and several different learning variables, followed by hypotheses and rationales.

RESEARCH QUESTION 1

What is the relationship between first generation status and the learning variables of motivation, goal orientation, implicit theories of intelligence, academic self-efficacy, academic anxiety, and fear of failure?

Hypothesis 1

First generation students will have less strategic learning beliefs and processes than non-first generation students.

Rationale 1

Research has identified a number of differences between FG students and non-FG students helping to explain discrepancies in attainment (Seidman, 2005). When compared to non-first generation students, FG students were more likely to have less rigorous college preparation, taking fewer higher level math and Advanced Placement courses, and have less exposure to resources aiding in college access (Choy, 2001), resulting in poor college preparation (Chen, 2005). Due to their poor preparation for college, unclear expectations yield misunderstandings resulting in poor grades (Collier and Morgan, 2008). While in college, FG students earning undesirable grades may begin to experience decreased self-efficacy for learning associated with a fixed theory of intelligence (Robins

& Pals, 2002); they can become performance-avoidant, choosing easier tasks that will not facilitate higher order achievement (Kitsantas & Chow, 2007). Specifically, it is hypothesized that FG students will be extrinsically motivated (external or introjected), and have a performance goal orientation and fixed theory of intelligence, lower self-efficacy, higher academic anxiety, and greater fear of failure.

RESEARCH QUESTION 2

What is the relationship between first generation status and self-compassion?

Hypothesis 2

First generation students will have less self-compassion overall than non-first generation students.

Rationale 2

This is an exploratory hypothesis, as there is no current research on first generation students and self-compassion. Still, there is reason to believe that first generation students may exhibit less self-compassion than their non-first generation peers when coping with academic failure based on their demographic characteristics and self-beliefs. As previously mentioned, the Self-Compassion Scale was adapted for the current study and measures six aspects of self-compassion related to coping with perceived or actual academic failure: Self-Kindness versus Self-Judgment; Common Humanity versus Isolation; and, Mindfulness versus Over-identification. When considering the six subscales, FG students are more likely to have critical self-attitudes and beliefs, even questioning their belonging in college in the first place (Pizzolato, 2004). These harsh self-judgments oppose the self-kindness displayed by self-compassionate individuals. FG

students are also more likely to feel isolated (Jehangir, 2008; Pike & Kuh, 2005), over-identify with disappointing academic outcomes, and attribute failure to ability rather than effort (Robins & Pals, 2002). FG students experiencing isolation as a result of poor academic performance may not be able to see their situation in light of common humanity, recognizing that all students struggle at times. Finally, FG students are more likely to over-identify with their failure, so that they are less able to see their situation clearly and mindfully.

RESEARCH QUESTION 3

What is the relation between self-compassion for poor performance and learning variables of motivation, goal orientation, implicit theories of intelligence, academic self-efficacy, academic anxiety, and fear of failure among FG and non-FG students?

Hypothesis 3

FG and non-FG students with higher self-compassion scores will also have more strategic outcomes on the learning variables.

Rationale 3

Research has underscored the importance of self-beliefs in learning for FG students (Contreras, 2005; Penrose, 2002; Ramos-Sanchez & Nichols, 2007) so that FG students with more self-compassion for poor academic performance should demonstrate more strategic learning beliefs and cognitive processes (Chemers, Hu & Garcia, 2001) such as increased intrinsic motivation, mastery goal orientation, self-efficacy, less anxiety, and less fear of failure. Traditional students with high levels of self-compassion

should also have more strategic learning beliefs and cognitive processes assuming that prior findings (Neff et al., 2005) are replicated with the current sample. Although the link between self-compassion and implicit theories of intelligence has not been examined before, it is expected that self-compassionate students will be more likely to hold an incremental (growth) theory of intelligence for several reasons: (a) they will approach poor academic outcomes with curiosity and self-kindness, instead of shame and fear, (b) they are less likely to attribute academic failure to their ability; instead they may see failure as a function of their effort, and (c) entity (fixed) theorists have been found to be more psychologically vulnerable during poor outcomes, which is in opposition to how incremental (growth) theorists perceive failure (Robins & Pals, 2002). Moreover, an incremental mindset has been linked with more strategic learning beliefs and processes, such as mastery goal orientation (Hong et al., 1999).

RESEARCH QUESTION 4

Does self-compassion for poor academic performance moderate the negative effects of first generation status on the learning variables?

Hypothesis 4

Self-compassion for poor performance will moderate the negative effects of first generation status on the learning variables.

Rationale 4

It was expected that self-compassion for poor academic performance would buffer the negative association between first generation status and learning measures (motivation, goal orientation, fixed theory of intelligence, academic self-efficacy,

academic anxiety, and fear of failure). As previously stated, traditional college students with higher scores on self-compassion have been shown to have higher scores on the learning variables (Neff et al., 2005). Then, first generation students who score high in self-compassion should demonstrate strategic learning beliefs and cognitive processes that are more similar to those observed among non-FG than those FG students with low self-compassion scores.

PARTICIPANTS

A total of 425 college students participated, of which 384 were recruited through two departmental subject pools from a large public university in the southwest: Educational Psychology (n = 266) and Psychology (n = 118). Educational Psychology (EDP) subject pool students who were enrolled in EDP 310: Individual Learning Skills were excluded from the study because they would be exposed to constructs related to this study in their course, potentially confounding their results. An additional consideration for participants in this study was that data could only be collected from second-semester freshmen students and beyond for subject pool participants as well as participants gathered from convenience sampling, as their college GPA was to be included as a control variable.

The procedure of recruitment through the EDP subject pool allows students enrolled in undergraduate EDP courses to obtain course credit through participation in research as subjects. As an alternative, students may also complete a research paper that involves a similar amount of time and effort. The procedure of recruitment through the Psychology (PSY) subject pool allows students enrolled in introductory psychology

classes (PSY 301) to obtain course credit through participation in research as subjects. As an alternative, students may also complete a research paper that involves a similar amount of time and effort. PSY 301 subjects were recruited for this study through a static posting in the online subject pool management system known as OPERA. EDP subjects were assigned to participate in this study via Subject Pool coordinators.

In the current study, first generation (FG) status has been operationalized as students who are the first in their family to enroll in college where no parents have obtained a Bachelor's degree. This is consistent with the operationalization of FG students in other research (Choy, 2001) and relevant for the current study as it was conducted at a four-year university. Participants who identified as first generation and non-first generation were both recruited, with an aim to include a relatively equal number of participants from both status groups. A little less than half (42.1%) of subject pool participants were FG students so to ensure an adequate number of FG students, data from an additional 31 participants enrolled in a university federally-funded program that services first-generation low income and/or disabled students were recruited. Finally, another ten participants were recruited from a second federally-funded transition to college program intended to create a small institutional environment for students enrolled in the larger colleges of Natural Science and Liberal Arts. Participants recruited through these programs received an email with a link attached to the survey (see Appendix J) asking them to fill out the survey and describing a small incentive, a chance to win one $25 Target gift card in a drawing.

A MANOVA was used to determine any significant differences between the groups based on their membership in each of the support programs on the set of dependent variables. Controlling for first generation status, group membership in an academic support program did not yield significant differences across outcome variables, F (12, 411) = 1.60, $p > .05$. Since no significant differences were found, the FG student support group participants were treated as a single group for the purposes of analysis. Descriptive statistics will be presented next on the total sample, describing the sample with respect to first generation (FG) status, ethnicity, gender, family income, age, and grade point average (GPA).

POWER ANALYSIS

A power analysis conducted by the G*Power Program was used to determine the sample size for the current study (Faul, Buchner, & Lang, 2009). According to these standards, the G*Power calculations with a power of .95, an alpha value of α =.05, and an effect of d=.25 yielded a minimum sample size of 95. Cohen (1988) classified effect sizes where d=.20 is a small effect size; d=.50 is moderate; and, d=.80 is a large effect size, however social sciences research has different standards where d=.10 is a small effect size; d=.30 is moderate; and, d=.50 is a large effect size. Based on the literature, this effect size is significant (Hall, Smith & Chia, 2008).

MEASURES

Demographic Survey

Participants were asked to respond to questions providing information about their demographics, including age, sex, ethnicity/race, first generation status, grade classification, estimated GPA, family income, UTeid for purposes of subject pool credit, and the way they were invited to access the survey (i.e. either subject pool or one of the student support programs).

Sex was determined with a forced response between male and female. Racial and ethnic information were combined, as recommended by Phinney (1996) into a single identifier for clarity. Racial and ethnic information was assessed by asking participants to check all boxes that apply: African American/Black; Hispanic/Latin American/Chicano(a); Native-American**;** Asian American; European American/White; Multiracial (Please specify) _____; Other _____. First generation status was determined with questions about Mother/Guardian's and Father/Guardian's highest level of education completed. Options included: Middle School; High School; Community College/Associate's Degree; College/Bachelor's Degree; Vocational/Technical School; and Advanced Degree (ex. MD, MA, JD, PhD). Family income was assessed by asking participants to check the box that best described their family's annual income: $0-25,000; $25,001-$50,000; $50,001-$75,000**;** $75,001-$100,000; $100,001-$125,000; $125,001-$150,000; and $150,001 and above.

Academic Self-Regulation Questionnaire

The Academic Self-Regulation Questionnaire (SRQ-A, Ryan & Connell, 1989) contains 32 Likert-type items about why students engage in learning-related activities.

The original scale was intended for use with children, however it was employed in this study because it contains four subscales (External Regulation, Introjected Regulation, Identified Regulation, and Intrinsic Motivation), rather than the two combined subscales (Controlled Regulation and Autonomous Regulation) generated by the Learning Self-Regulation Questionnaire for adult learners. The four SRQ-A subscales can be summed to obtain a Relative Autonomy Index. According to Williams and Deci (1996), the self-regulation scales can be adapted to meet the needs of the particular course or program being studied; in this case, the SRQ-A items are now designed to measure motivation for general college coursework.

Responses are calculated on a 5-point Likert scale ranging from 1 = *Not true at all* to 5 = *Very true*. Sample items include: ‘‘I am actively engaged in my college courses because I want the instructor to think I am a good student,” and ‘‘I try to do well in college because I enjoy succeeding in college.’’ Alphas for all study measures are presented in Table 2.

Goal Orientation

The Goal Orientation Scale (GO, Midgley, et al., 2000) is derived from the Patterns of Adaptive Learning battery and assesses students’ perceptions of their motivation to do their class work. The GO Scale has three subscales (Mastery, Performance-approach, and Performance-avoidance) and contains 15 Likert-type items where responses can range from 1 = *Not true at all* to 5 = *Very true*. Sample items for each subscale are included here: the mastery subscale - “It is important for me that I thoroughly understand my coursework”; the performance-approach subscale - “One of my goals is to show others

that I am good at my coursework"; and, the performance-avoidance subscale - "It is important to me that others do not think I am a poor student."

Implicit Theories of Intelligence

The Implicit Theories of Intelligence Scale (Dweck, Chiu, & Hong, 1995) contains 3 reverse-scored items designed to assess if students have a malleable and incremental (growth) mindset or entity (fixed) mindset regarding intelligence. Responses on a 5-point Likert scale range from 1 = *Strongly disagree* to 5 = *Strongly agree*. Sample items include: "You have a certain amount of intelligence and you really can't do much to change it" and "Your intelligence is something about you that you can't change very much."

Academic Self-Efficacy

The Academic Self-Efficacy Scale (Midgley, et al., 2000) contains 5 items and measures the degree to which an individual feels competent performing successfully on academic tasks. Responses are calculated on a 5-point Likert scale ranging from 1 = *Not at all true* to 5 = *Very true.* Sample items include: "I'm certain I can master the skills taught in my classes this year" and "I can do even the hardest work in my classes if I try."

Learning and Study Strategies Inventory

To assess participants' level of academic anxiety, this study used one subscale from the Learning and Study Strategies Inventory (LASSI). The LASSI (Weinstein, Palmer, Schulte, 2003) is described as a prescriptive and diagnostic tool designed to identify areas from Weinstein's (2007) Model of Strategic Learning (MSL) where students may need

additional resources to be successful in college.

The LASSI has two versions, one intended to measure college students' attitudes, beliefs, cognitive learning strategies and skills, and motivations and behaviors, another designed to measure high school students' learning behaviors. The LASSI college version was used for this study and has been normed on a college population (Weinstein, Palmer, & Shulte, 2002). The Anxiety subscale contains 8 items. Sample items from the Anxiety subscale include: "I feel very panicky when I take an important test" and "When I am studying, worrying about doing poorly in a course interferes with my concentration." Responses are given on a 5-point Likert scale ranging from 1 = *Not at all typical of me* to 5 = *Very typical of me;* responses are typically reverse-coded on this subscale however they were not for this study, as the scale was used to measure students' academic anxiety where higher scores indicated a greater degree of anxiety.

Fear of Failure Questionnaire

The Success/Failure Questionnaire II (SFQ, Herman, 1990) has 20 items and is designed to measure the inverse constructs of fear of failure and need to achieve, however only fear of failure was assessed in this study. Responses are on a 5-point Likert scale and range from 1 = *Strongly Agree* to 5 = *Strongly Disagree.* Sample items from the Fear of Failure subscale include: "When I fail, I often ask myself why I failed" and "I sometimes put forth only a small amount of effort toward accomplishing an important task, even though I know success is possible."

Self-Compassion Scale

The Self-Compassion Scale (SCS, Neff, 2003) was adapted to measure self-compassion for poor academic performance. An instruction was added where students were first asked to recount a recent academic experience where they felt they got a poor grade. The description of the grade as "poor" is intentionally subjective as personal perceptions of failure or success are most relevant to self-treatment. Students responded to the 26 adapted survey questions regarding bad grades like the experience they described. For example, the item "I'm tolerant of my own flaws and inadequacies" was adapted to "I'm tolerant of my own flaws and inadequacies as a student" to measure self-compassion for poor performance. Responses ranged on a 5-point Likert scale from 1= *Almost never* to 5 = *Almost always*. Sample items for each of the subscales are: Self-Kindness (e.g., 'I try to be understanding and patient towards myself as a student') versus Self-Judgment (e.g., 'I'm disapproving and judgmental about myself as a student'); Common Humanity (e.g., 'I try to see my failings as part of the human condition') versus Isolation (e.g., 'It tends to make me feel more separate and cut off from other students'); and, Mindfulness (e.g., 'I try to take a balanced view of the situation) versus Over-identification (e.g., 'I tend to obsess and fixate on what went wrong'). A single higher order factor of self-compassion explains the intercorrelations between the six subscales, so negative items were reverse-coded, means were calculated from each of the subscales, and then summed to create a total self-compassion score (Neff, 2003a).

ETHICAL CONSIDERATIONS

Prior to this study, the research proposal, informed consent, and a draft of the survey were submitted to the Institutional Review Board (IRB) of the University of Texas at Austin. IRB Approval on the proposal was obtained on July 19, 2011 (see Appendix I).

PROCEDURE

The data were collected via an emailed survey link for students in the support programs, and a link was available to the subject pool students once they were assigned to the proposed study. Participants received a Cover Letter for Internet Research with the Principal Investigator's contact information (see Appendix J) before they began the study. Participants were informed that they may take the survey in the location of their choosing (i.e., home, school, library, etc.) and had the opportunity to email the Principal Investigator any questions before they began answering survey questions. Participants were instructed to allot 60 minutes to take the survey, however most participants took between 26-56 minutes to complete the survey with a mean survey completion time of 49 minutes, 12 seconds. Participants were asked to complete a demographic survey on gender, age, ethnicity, family income, first generation status, and estimated GPA, and then described a recent experience with perceived or actual academic failure in college. Next, participants were prompted with a short blurb describing the study: "How do you deal with getting bad grades? Tell us about it in this survey." Finally, participants were asked to rate Likert scale-type items based on their perceived learning experiences, including beliefs about themselves as learners and their learning processes in college.

In order to protect the privacy of the participants, the instructions stated that they did not have to answer any question they did not feel comfortable answering and that

they were free to leave at any time during the session. The survey was not programmed to require any responses and survey participation was strictly voluntary. Confidentiality was protected any identifying information was removed from student responses on the questionnaires and was only accessible to the Principal Investigator.

The survey tool, Qualtrics, was utilized to capture the survey data responses. All questionnaires were initially collected by the primary researcher in a password protected online survey system (Qualtrics) accessed on the researcher's password-protected account and personal computer. According to the Qualtrics website: "Qualtrics has SAS 70 Certification and meets the rigorous privacy standards imposed on health care records by the Health Insurance Portability and Accountability Act (HIPAA). All Qualtrics accounts are hidden behind passwords and all data is protected with real-time data replication." The Principal Investigator's laptop was used to analyzed the data via SPSS, which is also password protected.

DATA ANALYSIS

All data were analyzed using SPSS software. Preliminary analyses were used to obtain descriptive statistics and to examine differences on the learning variables by ethnicity, gender, and family income. Several statistical analyses were employed during primary analyses. A MANOVA was used to assess differences by FG status on the learning variables and differences by FG status on the Self-compassion subscales. An ANOVA was used to investigate differences by FG status on self-compassion. Hierarchical regressions were used to examine the relation between self-compassion and the learning variables. Finally, a 2x2x2 ANOVA was used to test the moderation of self-compassion on the learning variables.

Chapter 4: Results

STATISTICAL ANALYSES

Descriptive Statistics Computation.

Table 1 (on page 74) presents demographic information from the sample of 425 participants. First generation students comprised just under half of the sample (42.3%). With respect to race or ethnicity, the majority of participants identified as White while the largest minority group was Hispanic students. A very small proportion of the participants identified as Native-American (1), Multi-racial (11), or Other (2) and were removed from the sample when conducting the primary analyses, given that ethnicity was one of the variables examined in this study and an "other" category would have potentially confounded results. Comparing FG to non-FG students, approximately 77.1% of the FG student sample identified as a minority race or ethnicity compared to 22.9% of non-FG participants.

Family income was next calculated for FG and non-FG participants, assessed by asking participants to report their parents' or guardians' combined family income. The majority of FG students (58.1%) were represented in the $50,000 and under income groups, whereas the majority of non-FG students (90.2%) indicated a family income of $50,001 and over.

Female participants represented the majority of the participants (66.1%). This is consistent with the demographics of students who enroll in educational psychology and psychology courses at the university.

The majority of the sample (80.0%) was of traditional college age (18-22). Participants had a mean age of 20.33 (standard deviation of 2.33), and a range of 17-37 years old. Although the means for both FG and non-FG students were within traditional college age, FG students were significantly older. Regarding participants' grade point average (GPA), 97.5% of the sample appeared to be in good academic standing, with a GPA of 2.00 or higher on a 4-point scale.

Preliminary Data Analyses

The first step of the preliminary analyses was dedicated to analyzing the sample with respect to first generation (FG) status and differences by ethnicity, gender, family income, and grade point average (GPA). Outcomes are presented in Table 1 and below.

A chi-square test of independence was performed to determine if ethnicity, gender, and income differed by FG status. FG students were more likely to identify as an ethnic or racial minority, X^2 (N, 1) = 77.23, $p < .001$. There were no significant gender differences, X^2 (N, 1) = .02, $p = .893$. There were significant income differences, however, indicating that FG students were more likely to report a family income of $50,000 and under, X^2(N, 1) = 115.06, $p < .001$. Dichotomous family income was used to represent family income $50,000 and under and $50,001 and over. Ethnicity and dichotomous family income were therefore entered as control variables in the hierarchical regression analyses when significant mean differences were found on an outcome variable.

ANOVAs were used to analyze differences in age and GPA by FG status. The total sample had a mean age of 20.32, however FG students were significantly older (M =

20.93) than non-FG students (M = 19.89) [F(1, 398) = 20.23, p<.001]. The total sample had a mean GPA of 3.17; however FG students had a significantly lower overall mean grade point average (GPA) (M = 2.96) when compared to non-FG students (M = 3.33) [F(1, 399) = 44.83, p<.001]. Age and GPA were also entered as control variables in the hierarchical regression analyses.

Table 1. *Participant Descriptive Statistics by FG Status*

		% FG	% Non-FG	Total %
Total Sample		179 42.1%	246 57.9%	425
Race/Ethnicity	Black	7.8%	5.3%	6.4%
	Asian	24.6%	15.9%	19.5%
	Hispanic	42.5%	9.8%	23.5%
	White	22.3%	65.4%	47.3%
	Native-American	0.6%	0.0%	0.2%
	Multi-racial	2.2%	2.8%	2.6%
	Other	0.0%	0.8%	.5%
Minority Status	Minority	77.7%	34.6%	52.7%
	Non-Minority	22.3%	65.4%	47.3%
Gender	Male	33.5%	34.1%	33.9%
	Female	66.5%	65.9%	66.1%
Income Level	$0-$25,000	17.9%	4.9%	10.4%
	$25,0001-$50,000	40.2%	4.9%	19.8%
	$50,001-$75,000	17.9%	13.0%	15.1%
	$75,001-$100,000	12.8%	17.9%	15.8%
	$100,001-$125,000	4.5%	17.1%	11.8%
	$125,0001-$150,000	2.8%	34.1%	6.4%
	Above $150,000	1.2%	19.8%	20.9%
Dichotomous Family Income	Under $50,000	58.1%	9.8%	30.1%
	Above $50,000	41.9%	90.2%	69.9%

Table 2 illustrates means, standard deviations, and reliability analyses for all study measures. The reliability of the instruments was calculated by a common psychometric measure of test and scale reliability, Cronbach's alpha. Cronbach's alphas were derived for the each of the measures in the current study to assess internal consistency of the instruments. Analyses revealed that all Cronbach's alphas fell in the acceptable range.

Table 2.

Means, Standard Deviations, and Reliability Analyses for Study Measures

Measure	*M (SD)*	Cronbach's α
Intrinsic Motivation (SRQ-IM)	2.82 (.80)	.83
External Regulation (SRQ-ER)	3.33 (.73)	.76
Introjected Regulation (SRQ-InR)	3.38 (.79)	.83
Identified Regulation (SRQ-IdR)	3.73 (.73)	.80
Goal Orientation-Mastery (GO-M)	4.05 (.77)	.89
Performance Approach (GO-PAP)	3.05 (1.00)	.88
Performance Avoidance (GO-PAV)	3.55 (.90)	.82
Fixed Theory of Intelligence (TOI)	2.83 (1.32)	.92
Academic Self-Efficacy (ASE)	3.96 (.77)	.91
Anxiety (ANX)	3.15 (1.00)	.90
Fear of Failure (FOF)	2.72 (.65)	.77
Self-Compassion (SCS)	18.73 (3.87)	.92
Self-Kindness (SK)	3.30 (.75)	.82
Self-Judgment (SJ)	2.71 (.88)	.82
Common Humanity (CH)	3.17 (.84)	.76
Isolation (I)	2.95 (1.07)	.91
Mindfulness (M)	3.51 (.72)	.73
Over-Identified (OI)	3.10 (1.00)	.82

Analyses were next conducted for significant main effects of ethnicity, sex, and family income on the learning variables (see Table 3). A MANOVA revealed significant differences [$F(36, 1167.80) = 2.103$, $p < .001$] between Asian, Black, Hispanic, and White students; follow-up ANOVAs revealed that Hispanic students had significantly greater mastery-oriented goals than White students while Asian students reported a significantly higher fixed theory of intelligence than Black and Hispanic students ($p < .05$). Asian also students reported significantly higher fear of failure compared to White students and Hispanic students ($p < .05$).

Table 3.

Means and Standard Deviations of Study Measures by Ethnicity

	Asian (n=83)		Black (n=27)		Hispanic (n=99)		White (n=201)		
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F* value
Intrinsic	2.87	.78	2.73	.78	2.89	.76	2.78	.83	.629
Extrinsic	3.26	.68	3.02	.70	3.33	.66	3.40	.74	2.625
Introjected	3.31	.72	3.09	.83	3.44	.75	3.43	.81	1.934
Identified	3.77	.74	3.52	.79	3.85	.65	3.68	.75	2.095
Mastery	4.07	.75	4.04	.84	4.26	.67	3.94	.81	3.955**
Perf-App.	3.41	.91	3.42	1.01	2.98	1.03	3.14	.97	1.282
Perf-Avoid	3.41	.91	3.42	1.01	3.55	.92	3.64	.85	1.497
Fixed Theory	3.20	1.42	2.42	1.20	2.57	1.35	1.22	1.23	4.584**
Self-efficacy	3.80	.78	3.96	.81	4.03	.82	3.98	.73	1.437
Anxiety	3.28	.90	3.24	1.08	3.21	1.09	3.06	.99	1.210
Fear of Failure	2.97	.68	2.73	.62	2.67	.69	2.65	.60	5.463***
Self-compassion	18.17	3.49	18.35	3.71	18.68	4.13	18.95	3.86	.869

Note. *$p \leq .05$. **$p < .01$. ***$p \leq .001$

Next, a main effect of gender was tested with a MANOVA revealing several significant mean differences [$F(12, 397) = 4.861$, $p < .001$]. Men had higher academic self-efficacy, more self-compassion, and greater fixed theory of intelligence compared to women. Alternatively, women had significantly more intrinsic motivation and more mastery goal orientation than men. Women were also significantly more extrinsically regulated and had more identified and introjected regulation compared to men. Finally, women reported significantly higher levels of academic anxiety than men. See Table 4 for the means and standard deviations of study measures by gender.

Table 4.

Means and Standard Deviations of Study Measures by Gender

	Males (*n*=138)	Females (*n*=272)	
	M (SD)	*M (SD)*	*F* value
Intrinsic	2.71 (.79)	2.88 (.80)	4.194*
Extrinsic	3.20 (.71)	3.39 (.71)	6.676**
Introjected	3.22 (.80)	3.47 (.76)	9.574**
Identified	3.54 (.78)	3.82 (.69)	13.372***
Mastery	3.89 (.85)	4.13 (.73)	9.190**
Perf-App.	3.04 (1.06)	3.07 (.97)	.079
Perf-Avoid	3.51 (.90)	3.58 (.90)	.580
Fixed Theory	3.03 (1.39)	2.75 (1.27)	4.299*
Self-efficacy	4.10 (.73)	3.89 (.79)	7.144**
Anxiety	2.90 (.95)	3.28 (1.01)	13.943***
Fear of Failure	2.71 (.65)	2.73 (.65)	.058
Self-compassion	19.30 (3.79)	18.37 (3.84)	5.424*

Note. *$p < .05$. **$p < .01$. ***$p < .001$.

Finally, the main effect of family income was tested with a MANOVA revealing two significant mean differences [$F(12, 397) = 2.666$, $p<.01$]. Results show that participants with an income of under $50,000 were significantly more mastery goal oriented than participants with an income over $50,000. Participants with an income of over $50,000 had significantly more self-compassion than participants with an income under $50,000. See Table 5 for the means and standard deviations of study measures by family income.

Table 5.

Means and Standard Deviations of Study Measures by Dichotomous Family Income

	Under $50,000 ($n$=123)	Above $50,000 ($n$=287)	
	M (SD)	*M (SD)*	*F* value
Intrinsic	2.86 (.83)	2.81 (.79)	.287
Extrinsic	3.25 (.66)	3.36 (.73)	2.091
Introjected	3.33 (.74)	3.41 (.80)	1.053
Identified	3.76 (.71)	3.71 (.74)	.407
Mastery	4.22 (.72)	3.98 (.79)	8.442**
Perf-App.	2.99 (1.00)	3.09 (.99)	.957
Perf-Avoid	3.47 (.90)	3.59 (.89)	1.480
Fixed Theory	2.71 (1.35)	2.90 (1.30)	1.869
Self-efficacy	3.96 (.75)	3.95 (.75)	.000
Anxiety	3.29 (1.03)	3.09 (.99)	3.404
Fear of Failure	2.80 (.74)	2.69 (.60)	2.570
Self-compassion	18.13 (4.12)	18.92 (3.70)	3.741*

Note. *$p \leq .05$. **$p < .001$.

Additional preliminary analyses included locating missing cases, examining outliers, calculating zero-order correlations for the measures, and assessing the statistical assumptions for hierarchical regression. Participants who were missing data were not included in the analyses, and a case analysis was conducted to assess any excessive outliers.

Statistical Assumption Checking.

According to Keith (2006), for trustworthy results and reliable interpretations of regression coefficients, the assumptions underlying hierarchical regression should be checked and met (i.e., normality, linearity, homoscedasticity and homogeneity of variance, independence of error, absence of multicollinearity).

For all outcome variables, the skewness and kurtosis values were inspected for ranges of -1 to 1. Normality is violated because the data are not normally distributed due to their originating from a 5-point Likert scale. The linearity and homoscedasticity assumptions was assessed by examining a scatterplot between standardized predicted values and standardized residuals which showed a mild violation, however this is likely due to ceiling and floor effects. The large sample size, however, makes the analyses robust to these violations. Given that each participant's data were independently collected and no treatment was administered, independence was not violated. Finally, multicollinearity was assessed by inspecting tolerance statistics, looking for values over .25 (and the closer to 1, the better). No multicollinearity violations were observed.

Table 6. *Zero-order Correlations for Study Variables*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. FG Status	–																
2. Age	.215**	–															
3. Gender	.015	-.143**	–														
4. Fam. Inc.	.520**	.188**	.074	–													
5. GPA	-.327**	-.037	.050	-.257**	–												
6. SRQ-IM	.014	-.039	.101*	.026	.161**	–											
7. SRQ-ER	-.043	-.212**	.127*	-.071	.045	.218**	–										
8. SRQ-InR	-.048	-.192**	.151**	-.051	.093	.354**	.792**	–									
9. SRQ-IdR	.049	-.166**	.178**	.032	.167**	.594**	.377**	.522**	–								
10. GO-M	.136**	-.088	.148**	.143**	.081	.354**	.205**	.389**	.639**	–							
11. GO-PAP	-.067	-.094*	.014	-.048	.016	.222**	.520**	.578**	.200**	.237**	–						
12. GO-PAV	-.068	-.141**	.038	-.060	-.023	.095	.558**	.620**	.183**	.271**	.812**	–					
13. TOI	-.122*	-.095	-.103*	-.069	.144**	.016	.220**	.156**	-.016	-.081	.178**	.142**	–				
14. ASE	-.032	.089	-.130**	.004	.104*	.294**	-.011	.051	.238**	.326**	.062	.022	-.238**	–			
15. ANX	.078	-.096	.182**	.091	-.211**	-.085	.263**	.317**	.037	.050	.264**	.279**	-.202**	-.328**	–		
16. FOF	.052	-.166**	.012	.079	-.135**	-.180**	.180**	.145**	-.115*	-.127*	.274**	.277**	.277**	-.393**	.566**	–	
17. SCS	-.058	.165**	-.113*	-.092	.151**	.149**	-.189**	-.212**	.065	.054	-.253**	-.333**	-.176**	.389**	-.612**	-.542**	–

Note. FG Status = First generation status; Fam. Inc.=Family income; SRQ--IM=Intrinsic Motivation; -ER = External Regulation, -InR=Introjected Regulation; -IdR=Identified Regulation; GO-M = Mastery Goal Orientation; -PAP=Performance Approach; -PAV=Performance Avoidance; TOI = Fixed Theory of Intelligence; ASE = Academic Self-Efficacy; ANX = Academic Anxiety; FOF = Fear of Failure; SCS=Self-Compassion Scale

Primary Data Analyses

Hypothesis 1: First generation students will have less strategic learning beliefs and processes than non-first generation students.

The first research question was examined using a MANOVA (multivariate analysis of variance) to assess the impact of first generation status on the set of learning variables, MANOVA employs protected testing (with a Bonferroni correction) to help control for type 1 error inflation rate and assesses a group of related dependent variables. All learning variables are related to strategic learning and thus appropriate for the MANOVA analysis. Prior to running the MANOVA, statistical assumptions and descriptive statistics were checked indicating that MANOVA was an appropriate statistical tool. The test of the multivariate null hypothesis indicated that the groups differed on the set of dependent learning variables, $F(12, 397) = 2.653$ $p < .01$.

For most of the outcome variables, post-hoc ANOVAs were used to determine if differences existed depending on FG status. However, three of the outcome variables - mastery goals, fear of failure, and fixed theory of intelligence - were found in preliminary analyses to differ by ethnicity and level of family income. Because FG and non-FG students also differed according to ethnicity and income level, follow-up tests accounted for these differences. Interactions (FG status*ethnicity) were used to account for differences by ethnicity on the three variables: for mastery goals, there were differences between Whites and Hispanics; fear of failure differed between Asians, Whites, and Hispanics, and finally fixed theory of intelligence differed between Asians, Blacks, and

Hispanics. For mastery goals, there were also differences by income, so instead of an ANOVA, an ANCOVA controlling for continuous family income was run as a follow-up test. Because there were no differences by income on fear of failure and fixed theory of intelligence, ANOVAs were employed as follow-up tests.

Table 7 presents differences in outcome variables according to FG status, while Tables 9 and 10 present differences in outcome variables according to the FG*ethnicity interaction. There were no significant differences by FG status, however there was a significant interaction between FG status and ethnicity for fixed theory of intelligence and a significant main effect of identifying as Asian. As illustrated in Figure 2, Asian FG students had significantly greater fixed theory of than Asian non-FG students, and FG non-Asians have a lesser fixed theory of intelligence that non-FG non-Asians. There was no main effect of FG status on the learning variables, so these findings were contrary to Hypothesis 1 where FG students were expected to have less strategic learning beliefs and processes than non-FG students.

Table 7.

Means and Standard Deviations of Study Measures by FG Status

	FG (N=164)	non-FG (N=212)	
	M *(SD)*	M *(SD)*	*F* value
Intrinsic	2.84 (.81)	2.81 (.80)	.08
Extrinsic	3.29 (.70)	3.35 (.73)	.77
Introjected	3.34 (.79)	3.42 (.77)	.96
Identified	3.77 (.75)	3.70 (.72)	1.00
Perf-App.	2.98 (.99)	3.12 (1.00)	1.84
Perf-Avoid	3.48 (.92)	3.61 (.87)	1.91
Self-efficacy	3.92 (.85)	3.98 (.71)	.50
Anxiety	3.24 (1.07)	3.08 (.95)	2.53

Table 8.

2x2 ANOVA for Fixed Theory of Intelligence

	df	*Mean Square*	*F*	*p*
FG Status	1	5.429	3.355	.070
Asian	1	10.756	6.646	.010
FG*Asian	1	21.944	13.546	.000

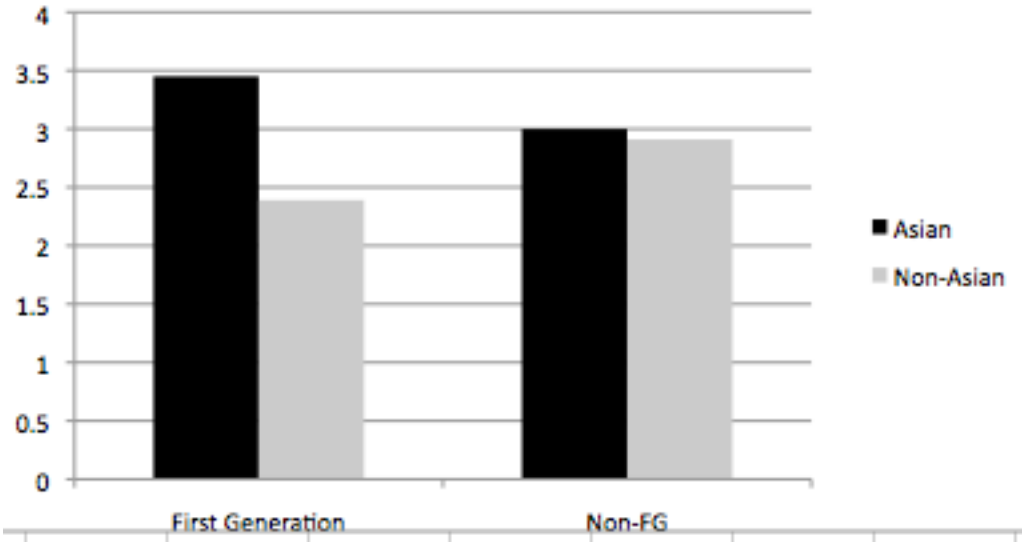

Figure 2. ANOVA Results for FG*Asian Interaction on Fixed Theory of Intelligence

Table. 9

*Means and Standard Deviations of Study Measures (FG Status*Ethnicity)*

	Asian		Non-Asian		Total		
	FG (N=44)	non-FG (N=39)	FG (N=130)	non-FG (N=198)	FG (N=173)	non-FG (N=237)	
	M *(SD)*	M *(SD)*	M *(SD)*	M *(SD)*	M *(SD)*	M *(SD)*	*F* value
Fixed Theory	3.45 (1.48)	2.91 (1.30)	2.39 (1.19)	3.00 (1.27)	2.66 (1.35)	2.98 (1.27)	9.984**
Fear of Failure	3.17 (.76)	2.76 (.50)	2.63 (.66)	2.68 (.60)	2.76 (.73)	2.70 (.59)	.952

Note. **$p < .01$.

Table 10.

*Means and Standard Deviations of Study Measures (FG Status*Ethnicity) Controlling for Income*

	Hispanic		Non-Hispanic		Total		
	FG (N=75)	non-FG (N=24)	FG (N=98)	non-FG (N=213)	FG (N= 173)	non-FG N=237)	
	M *(SD)*	M *(SD)*	M *(SD)*	M *(SD)*	M *(SD)*	M *(SD)*	*F* value
Mastery Goals	4.33 (.63)	4.05 (.77)	4.05 (.83)	3.95 (.78)	4.17 (.76)	3.96 (.78)	0.331

Hypothesis 2: First generation students will have less self-compassion overall than non-first generation students.

The second research question was examined using an ANOVA to assess the impact of first generation status on self-compassion, testing to see whether first generation students have less self-compassion overall than non-first generation students. There were no significant differences on the total Self-Compassion Scale (see Table 11), $F(1, 409) = 1.37$, $p = .243$. Next a MANOVA was employed to assess differences on the subscales. A test of the multivariate null hypothesis indicated that the groups differed on the subscales overall, $F(6, 404) = 3.86$, $p < .001$. Table 11 shows results of the post hoc univariate analyses. Groups differed on the Isolation subscale, where FG students reported feeling significantly *more* isolated than non-FG students.

Table 11.

Self-Compassion by FG Status

	FG (*n*=174)	non-FG (*n*=237)	
	M (SD)	*M (SD)*	*F* value
Total SC	18.43 (3.68)	18.71 (3.04)	1.37
Self-Kindness	3.33 (.80)	3.28 (.70)	.48
Self-Judgment	3.10 (1.00)	3.04 (.87)	.43
Common Humanity	3.17 (.82)	3.16 (.86)	.01
Isolation	3.25 (1.12)	2.92 (1.02)	9.68*
Mindfulness	3.43 (.77)	3.54 (.68)	2.37
Over-Identified	2.98 (1.07)	2.86 (.95)	1.47

Note. *$p < 0.01$.

Hypothesis 3: For both FG and non-FG students, higher self-compassion scores will be associated with higher scores on the learning variables.

This hypothesis was examined using hierarchical regressions that investigated the link between self-compassion and each learning variable separately. When significant on the outcome measure, the variables of sex, ethnicity, age, family income, or GPA were entered in Step 1 as control variables, and Step 2 examined the contribution of self-compassion. Table 12 depicts a summary of the results of 11 regressions. The full tables for each learning variable, including control variables, are included in Appendices K-T.

Table 12.

Summary of the Learning Variables Regressed on Self-Compassion after Controlling for GPA, Age, Sex, Ethnicity, and Family Income in Step 1.

	Standardized Coefficients		
Criterion Variables	β	ΔR^2	*F* value
Intrinsic Motivation	.140	.018	6.94**
Extrinsic Regulation	-.170	.027	10.55***
Introjected Regulation	-.184	.032	12.44***
Identified Regulation	.091	.008	2.99
Mastery Goal Orientation	.107	.011	4.07*
Performance-Approach Goal Orientation	-.240	.054	20.71***
Performance-Avoidance Goal Orientation	-.314	.093	37.69***
Fixed Theory of Intelligence	-.171	.027	10.64***
Academic Self-Efficacy	.350	.115	48.72***
Academic Anxiety	-.564	.299	175.94***
Fear of Failure	-.486	.221	115.48***

Predictors: (Constant), GPA, age, sex, ethnicity, dichotomous family income, SCS centered
Note. *$p < .05$. **$p < .01$. ***$p \leq .001$.

Hierarchical regressions were run to calculate the change in variance, assessing whch variables significantly contributed to each learning variable. As hypothesized (and depicted in Table 12), controlling for GPA, age, sex, ethnicity, and dichotomous family income when there were significant mean differences on the outcome, there were significant associations with ten of the eleven learning variables. Looking at Step 1 of the regressions, age was significantly, negatively related to: extrinsic regulation (β = -.199); introjected regulation (β = -.173); identified regulation (β = -.135); performance-

avoidance orientation (β = -.144); fixed theory of intelligence (β = -.105); and, fear of failure (β = -.175). As age increases, each of these variables decrease.

GPA was significantly, positively related to intrinsic motivation (β = .164); identified regulation (β = .151); mastery-approach goal orientation (β = .143); fixed theory of intelligence (β = .105); and, academic self-efficacy (β = .117). As GPA increases, each of these variables increase. GPA was negatively related to academic anxiety (β = -.236) and fear of failure (β = -.165); as GPA increases, academic anxiety and fear of failure decrease.

Gender was significantly, positively related to introjected regulation (β = .106); identified regulation (β = .129); mastery-approach goal orientation (β = .098, marginally significant); and, academic anxiety (β = .188) and negatively related to fixed theory of intelligence (β = -.119) and academic self-efficacy (β = -.140). Being female is significantly related to increases on each of these constructs. Gender was negatively related to academic anxiety (β = -.236) and fear of failure (β = -.165); being a female decreases academic anxiety and fear of failure.

Family income was significantly, positively related to mastery-approach goal orientation (β = .139), where a lower income yielded greater mastery-goal orientation. There were also significant relations by ethnicity for Asians. Being Asian was significantly, positive related to a fixed theory of intelligence (β = .125), and fear of failure (β = .204). Asian students were more likely to have a higher fixed theory of intelligence and a higher fear of failure.

In Step 2 of the regressions where self-compassion was added, results show that as self-compassion increases there is a significant increase in: Intrinsic Motivation, Mastery Goal Orientation, and Academic Self-Efficacy. Moreover, as self-compassion increases there is a significant decrease in: External Regulation, Introjected Regulation, Performance-Approach Goal Orientation, Performance-Avoidance Goal Orientation, Fixed Theory of Intelligence, Academic Anxiety, and Fear of Failure. In sum, self-compassion was a significant predictor of the variability in every learning variable except Identified Regulation. To see how each step contributes to the learning variables, the regression for Intrinsic Motivation (illustrated in Table 13) will be interpreted as an example. As previously stated, the remaining tables for the learning variables are interpreted on pp. 133-142 and located in Appendices K-T.

Table 13.

Regression Examining Intrinsic Motivation

Step		Standardized Coeff.		Change Statistics	
		Std. Error	β	R^2	R^2 Δ
1	(Constant)	.474		.033	--
	Gender	.089	.067		
	Age	.018	-.016		
	GPA	.071	.164**		
2	(Constant)	.477			
	SCS	.011	.140**	.051	.018

Note. $*p < .05$. $**p < .01$. $***p \leq .001$.

In the preliminary analyses, there were differences by gender on Intrinsic Motivation, as well as age and GPA for FG students. All three variables were therefore entered as controls in Step 1 of the regression. As shown in Table 13, the only significant

association with Intrinsic Motivation was GPA. As a student's GPA increases, so too does their Intrinsic Motivation. This can be interpreted as those who have higher grades are more likely to have a greater tendency of approaching tasks for inherent satisfaction. Earning a pattern of high grades may afford individuals the ability to focus on tasks they find enjoyable and pleasant instead of feeling pressured to complete tasks through other types of motivation, such as extrinsic regulation (a task completed for an external outcome) or introjected regulation (completing a task for the approval of others).

In Step 2 of the regression, Self-compassion is added as a centered score to see if, after controlling for the aforementioned demographic variables (gender, age, and GPA), there is a significant relation between Intrinsic Motivation and Self-compassion. Indeed, as shown in Table 13, as a student's Self-compassion increases, their Intrinsic Motivation also increases. This means that individuals who are more self-compassionate in the face of academic disappointment are more likely to engage in tasks because they are enjoyable and not based on a source of pressure (internal or external) to complete a task.

Hypothesis 4: Self-compassion for poor performance will moderate the negative effects of first generation status on the learning variables.

This hypothesis was predicated upon confirmation of the hypothesis for Research Question One that FG students had less strategic learning beliefs and processes than non-FG students. Due to the contrary findings for the main effect of FG status on the learning variables, there was no need to run moderation analyses on these variables.

Chapter 5: Discussion

This study examined the impact of self-compassion, college students' first generation status, and the potentially buffering effect of self-compassion on the hypothesized deleterious effects of FG status for a set of learning outcomes: motivation (external, introjected, and identified regulation, and intrinsic motivation), goal orientation, fixed theory of intelligence, academic self-efficacy, academic anxiety, and fear of failure.

Preliminary Analyses

FG students did have significantly lower GPAs than non-FG students in this study, which is consistent with the literature on FG student achievement (Chen, 2005), however they did have less strategic learning beliefs and cognitive processes. It appears that there might be other factors than learning beliefs and cognitive processes impacting FG students' worse GPA. For instance, high school intensity (academic preparation and rigor) might influence low GPA when students are not able to take college preparatory courses because these are not offered in their schools (i.e. Advanced Placement courses) or the courses they do take are not as rigorous as those from more competitive high schools. Classes that may seem the same across high schools (Advanced Placement Physics, for example) may not actually be as effective in preparing students with a strong foundation of prior knowledge upon which to build in college. Research has found an interaction between poverty and grade inflation; when students had to demonstrate core subject knowledge, individuals from lower socioeconomic (SES) areas were earning A's

for the same work that earned higher SES students C's (Ziomek & Svec, 1997). FG students may feel prepared because they earned high grades in high school but struggle to adjust in college because their preparation was not as intense. The realization that FG students are not as well-prepared for college as they originally thought after doing so well in high school may come as a shock, leaving FG students feeling lost in their courses.

Also consistent with FG student literature, this study found that FG students are more likely to have a lower SES than non-FG students. SES is another variable that may be impacting FG students' GPAs, as research has found that students of high SES are two times as likely to take an AP course than students of low SES (Roderick et al., 2009). Further, advanced coursework is not always available for students in predominantly low SES schools. Taking college-level coursework offers students academic skills and knowledge, but it also exposes them to information about college-level expectations. Moreover, a wide body of research has also been dedicated to examining institutional barriers impacting academic outcomes for students from lower income families. Stephens, Fryberg, Markus, Johnson, and Covarrubias (2012) described the "cultural mismatch" which occurs when first-generation college students attempt to traverse the social class achievement gap by enrolling in college. The researchers used parental education level as a proxy for students' social class background, indicating that FG students were more likely to be members of the working class. They found that many American higher education institutions are founded upon the cultural norms of the middle-class (largely independent), so individuals from working class backgrounds (primarily interdependent) experienced greater difficulty on academic tasks when they

felt unable to connect with the institution. Stephens et al.'s findings underscore the importance of the "unseen disadvantage" students from working class families experience, which negatively influences their academic outcomes (p. 15).

Another characteristic of the FG student found in the current study and in the FG student literature, is the likelihood of belonging to an ethnic minority group. Hispanic students comprised nearly 24% of the sample in the current study, while Asians comprised nearly 20% of the sample; over half of the sample (52.7%) identified as a racial or ethnic minority. Although more and more students of ethnic minorities are enrolling in college, achievement gaps remain. One study showed that only 23% of Blacks and 21% of Hispanic students met mathematics college readiness standards compared to 57% of Whites (Massachusetts Department of Education, 2005). As FG students are more likely to belong to these groups, trends like these for students from financially disadvantaged and ethnically underrepresented backgrounds may help explain why FG students have lower GPAs than non-FG students.

There are several other factors that have been associated with ethnic minority status and decreased academic outcomes such as stereotype threat (how the beliefs or stereotypes others have about one's membership in a particular group related to underperformance negatively impacts outcomes for that individual) and perception of racial climate (the degree to which students perceive racism occurring on their campus) (Fischer, 2009). Research has shown that students from minority groups are well-attuned to the pervasive beliefs, perceptions, and stereotypes on a college campus (Torres & Charles, 2004). According to Fischer (2009):

> For minorities in highly selective colleges and universities, students are constantly faced with opportunities to live up to a negative stereotype. Minority students who are most cognizant of these negative stereotypes therefore may feel additional pressure to perform, not only to live up to their own academic standards but also to not confirm a negative stereotype about their group. (p. 20)

This research echoes Hans-Vaughn's (2004) work who found pre-college characteristics for FG students created the most significant obstacle towards college attainment, therefore, further research is needed examining students within the FG population to detect where differences lie that might be contributing to worse outcomes (i.e. high school intensity, low SES, ethnic minority status). There could be a host of additional factors responsible for the lower achievement of FG students (when compared to non-FG students) that were not measured in this study, and more research is needed on variables such as perceived high school rigor and intensity, and how they impact achievement.

RESEARCH QUESTION 1

Analyses on the first research question regarding group differences between FG and non-FG students on the learning variables revealed no main effect of FG status however there differences looking at the FG*ethnicity interaction on one of the learning variables: fixed theory of intelligence.

Within the FG student literature, FG students have been found to have negative self-beliefs (Hertel, 2002; Penrose, 2002; Pizzolato, 2004), so the finding that FG students did not have significantly less strategic learning beliefs regarding their fixed

theory of intelligence is in contrast with previous research (Collier & Morgan, 2008). In her qualitative study looking at FG students' coping beliefs and behaviors in college, Pizzolato (2004) found that the majority of the sample of FG students felt prepared when they entered college, but were forced to recalibrate their academic self-efficacy, especially in instances of social comparison where peers were outperforming them. As a result, FG students were left feeling wholly incompetent when they experienced their own failure, and several participants never recovered from these negative experiences. In the end, they were unable to adapt to college successfully. While FG students in the current study did not have significantly worse self-efficacy (the belief that they will be successful on future academic tasks) than their non-FG peers, experiencing low grades and ultimately contributing to a less adaptive mindset regarding college learning could be impacting outcomes for a subset of FG students. Overall those identifying as Asian reported a significantly higher fixed theory of intelligence, however the effect was greatest for Asian FG students.

Aspelmeier et al. (2012) found that in addition to serving as a source of risk, FG status also acts as a sensitizing factor, which can amplify both positive and negative outcomes. Although fixed theory of intelligence did not impact first-generation status in general, there was a significant interaction effect indicating that first generation status was associated with fixed theory of intelligence for Asian students. Being first in the family to enroll in college and reported a fixed theory of intelligence may leave Asian FG students unable to recover from earning low or failing grades when they believe their intelligence cannot change, no matter how much effort they put forth. Despite being one

of the highest academically achieving ethnic groups (College Board, 2008; U.S. Department of Education, 2009), research on Asian students' self-perceptions has pointed to their harsh self-beliefs, stemming from their awareness of their membership in the Model Minority Stereotype (Butterfield, 1986). Briefly, the Model Minority Stereotype (MMS) describes a cultural expectation placed on Asians as the smartest and most hard-working, among other positive attributes, creating an internalized sense of needing to be "perfect" academically. Even though Asian students have been found to have higher academic outcomes like GPAs and standardized test scores (U.S. Department of Education, Institute of Education Sciences & National Center for Education Statistics, 2005), there is still heterogeneity within Asian college students. That is, not every Asian college student earns a 4.0 GPA even if students feel pressured to do so. Having a greater fixed theory of intelligence (the belief that one's intelligence is static and cannot improve) is consistent with the findings on shame and guilt associated with their perceived (or actual) inability to meet societal, cultural, and familial standards (Tang, 2008); that is, these students may believe they are simply not smart enough for college. Accordingly, Wei, Heppner, Ku, and Lao (2010) found, after controlling for general stress, minority-related stress significantly predicted depression among Asian-American students; however this population is often ignored in research and practice due to factors such as the Model Minority Stereotype. Research has shown that practitioners tend to make assumptions about Asian students based on this stereotype (Gloria & Ho, 2003), while Asian students fail to ask for help believing that they must meet cultural standards where they should not experience problems in learning. Each of these phenomena could

contribute to FG Asian students' fixed theory of intelligence, where students believe that poor understanding of course concepts is an indicator that they are not measuring up to cultural standards and do not belong in college.

While there were no significant differences by FG status on the learning variables, FG students still performed worse academically in the current study. In this case, there may be other factors related to FG status impacting students' lower GPAs. For example, by enrolling in college, FG students are breaking family patterns where their parents have not earned college degrees. The decision to enroll in college could place a significant amount of pressure on FG students, so contextual stress related to FG status (i.e., family pressure) could be impacting performance. Lower GPA could also be related to a number of other variables known to be associated with FG status such as less college preparation, more challenge navigating unfamiliar academic territory with limited assistance, worse adjustment to college, and so forth.

Overall, these results raise questions regarding other factors that might be impacting the success of FG versus non-FG students, since it seems the differences do not lie in these students' strategic learning beliefs and cognitive processes. One consideration for the remaining variables on which there were no differences by FG status may be related to the institution in which participants were enrolled; it is a research-intensive, prestigious institution presumably enrolling a different type of FG student. In a study on a national data sample, Ishitani (2006) found that high school intensity also played a major role in college attrition for FG students. Specifically, students who were ranked lower in their high schools were more likely to drop out of

college. Because UT-Austin enrolls a more competitive student body, high school intensity (measured by high school class rankings) may be one factor influencing the contrary findings for FG students on the learning variables in this sample. In this case, more research is required that can further predict variables contributing to decreased GPA for FG students attending academically rigorous institutions.

RESEARCH QUESTION 2

It was expected that non-FG students would have more self-compassion than FG students. Contrary to the hypothesis, however, results for the second research question showed that self-compassion did not differ by FG status. It may be that FG students are simply not less self-compassionate than non-FG students. However more research is needed to examine the link between self-compassion and FG status as the participants in this study did not follow the national profile of FG students. For example, these participants are more traditionally college-aged than what has been described in the national profile (Engel & Tinto, 2008).

One reason it was hypothesized that FG students would have less self-compassion was based on Bowman's (2010) findings that FG status was associated with lower self-acceptance. The current findings, however, contradict Bowman's (2010) findings. One reason for this contradiction may be the extent to which self-acceptance differs from self-compassion. In Bowman's study, self-acceptance was measured with Ryff's Positive Well-Being (PWB) (1989b) scale with a subscale of self-acceptance. This subscale measures a trait more similar to self-esteem than self-compassion. Although these constructs have been correlated due to their relation with well-being (Neff 2003a), they

are very different: “While self-compassion is related to well-being because it helps people feel safe and secure, self-esteem is related in part because it helps people to feel superior and self-confident” (Neff, 2011, p. 7). Below are two sample items to further delineate the difference between the concepts being measured. Ryff’s PWB scale alludes to social comparison (“When I compare myself to friends and acquaintances, it makes me feel good about who I am”) whereas Neff’s SC scale focuses on treatment of the self (“When I’m going through a very hard time, I give myself the caring and tenderness I need”). Thus, it may be that while FG students differ from non-FG students in their level of self-esteem, they do not differ in their level of self-compassion, although further research will be needed to test this proposition directly.

When looking at the Self-Compassion subscales separately, results did indicate one significant difference by FG status: FG students reported feeling significantly *more* isolated in their academic disappointment or failure self-compassion than non-FG students. These results supported the hypothesis based on the research that has shown FG students to feel more isolated due to their first generation status (Hertel, 2002; Pizzolato, 2004), to feel less prepared for college (Byrd & MacDonald, 2005), to exhibit poor help-seeking practices (Choy, 2001; Oliverez & Tierney, 2005), and to feel alienated from their family (Richardson & Skinner, 1992; Somers et al., 2004). At a time when familial support may become very important, FG students have also been found to experience challenges when seeking support from their family who might criticize their decision to enroll in college in the first place (Olive, 2008).

As seen in Pizzolato's (2004) study, FG students felt prepared as they entered college; however, transactions take place that leave students less able to navigate their environment. FG students may make social comparisons as they witness other students succeeding in areas where they are not, impacting their self-efficacy to be successful. Instead of exercising use of their available resources (including the same peers who have succeeded, professors, and TAs), FG students appeared to isolate themselves when confronted with academic disappointment, as if they were the only ones experiencing failure. This finding may help explain, in part, why FG students have been shown to exhibit worse help-seeking behaviors (Choy, 2001; Oliverez & Tierney, 2005). They may not even be able to see that help is an option for them. Even though FG students may not have less self-compassion than non-FG students, college could feel incredibly isolating for an individual who is less able to find people who they perceive are like them with similar struggles.

RESEARCH QUESTION 3

As for Research Question Three, all students (regardless of FG status) with higher overall self-compassion scores were expected to have higher scores (or more strategic outcomes) on the learning variables. After accounting for differences in GPA, age, sex, ethnicity, and dichotomous family income (under $50,000 and over $50,000), it appears that self-compassion was positively related to academic self-efficacy, mastery goal orientation, and intrinsic motivation. Self-compassion was also negatively related to performance-approach, performance-avoidance, fixed theory of intelligence, academic anxiety, and fear of failure.

Self-compassion positively predicted academic self-efficacy, meaning that students who reported higher self-compassion were more likely to feel capable of successful outcomes on future tasks. Stated another way, students who are less critical of themselves in the face of poor academic outcomes may feel better about their perceived competence in a task because they're not undermining their self-confidence through harsh self-criticism. These results support the few studies examining this issue (Iskender, 2009; Neff et al., 2005).

It is not surprising that self-compassion and academic self-efficacy are linked, given that both constructs are based on adaptive, positive self-beliefs. What may be more informative is to uncover the attributions (or reasons) students generate when they fail; do they credit their failure to low effort, poor inherent ability, or an external source like an unfair task or a biased instructor? Aspelmeier et al. (2012) found that an external locus of control (a variable based on an individual's attributions that addresses their patterns of attribution-making – which are internal or external reasons for failure and success; see Lefcourt, 1991 for a review) for FG students resulted in worse emotional and personal adjustment. There may be additional findings that help further explain why greater self-compassion leads to higher academic self-efficacy by examining attributions. For example, higher self-compassion for poor academic performance predicting higher academic self-efficacy could suggest that even though individuals may experience a low grade in a class, they may not feel discouraged and can still see themselves succeeding in future tasks related to the class. By investigating FG students' attributions, more information could be gleaned to help elucidate the link between self-compassion and self-

efficacy. For example, students who are self-compassionate may be making healthy (internal, controllable) attributions for why they did not succeed ("I could have studied more effectively") rather than beating themselves up, thus preserving future academic self-efficacy.

Moreover, self-compassion was also related to a mastery goal orientation, a finding consistent with (Neff et al., 2005). Students who reported more self-compassion were better able to engage in goals for personal growth and enjoyment rather than out of a need to perform and appear competent to others; this is probably due to students coping with academic failure in a positive, less self-critical way as not to feel discouraged from pursuing goals if they fail.

Indeed, self-compassion negatively predicted both performance-approach and performance-avoidant goal orientations. Those who had greater self-compassion were also less likely to adopt a performance-approach goal orientation, meaning those with healthier self-treatment related to academic failure were less motivated by a need to outperform others and earn public recognition. Those with greater self-compassion were also less likely to engage in a goal through performance-avoidance; this could be interpreted to mean that individuals who extend more care to themselves when they fail academically are less concerned with appearing incompetent when compared with others. Self-compassionate individuals do not take the failure as personally and are not as concerned with how they measure up to others. These relationships replicated those found in Neff et al.'s (2005) study, pointing to the robust nature of the findings on self-compassion and achievement goal orientation.

Even though self-compassion has been linked with engaging in goals for personal growth and enjoyment, it should be stated that to be self-compassionate does not mean one is not motivated to achieve nor does it mean one is overly indulgent. In fact, self-compassionate individuals want to do well in their pursuits. The difference between a self-compassionate and non-self-compassionate individual is the self is not targeted when those who have more self-compassion fall short (Neff et al., 2005). It seems this perspective could inform a healthier goal orientation that includes components of mastery goal orientation while also focusing on desiring positive outcomes without a myopic focus on performance.

Finally, self-compassion positively predicted intrinsic motivation. Rather than requiring an external source of reinforcement to be motivated to action for an academic task, intrinsic motivation refers the source of one's drive that is based on personal fulfillment. In line with previous research, self-compassion has been linked with intrinsic motivation (Neff et al., 2005) but there have been no studies examining the link between self-compassion and forms of regulation. Overall, it could be that being self-compassionate is simply related to a more adaptive mindset. Being able to internalize value for tasks and having the foresight to connect them to larger goals could be linked with greater well-being (Ryan & Deci, 2000), so that intrinsically motivated individuals may be more mindful, more open, and able to adopt a non-judgmental attitude towards tasks.

Neff (2003) found that self-compassion was associated with Self-Determination Theory's (SDT) three basic needs, autonomy, competence, and relatedness; therefore,

self-compassion's link to intrinsic motivation may be explained, in part, through SDT's tenets of competence and relatedness. Self-compassion can help protect an individual's sense of competence because those who are self-compassionate are less likely to get down on themselves when facing disappointing outcomes. This is in line with the findings related to competence in that self-efficacy, or perceived competence, has been positively correlated with self-compassion (Neff et al., 2005). Additionally, self-compassion's promotion of common humanity is similar to SDT's relatedness. Ryan and Deci (2000) proposed a greater connection with others as a self-determining factor, while Neff (2003b) discussed common humanity as one of three tenets of self-compassion. Although a sense of common humanity does not necessarily imply connection with specific individuals, a global awareness of others who might be having similar experiences may engender a more abstract sense of relatedness, a factor that underlies intrinsic motivation.

Self-compassion also negatively predicted extrinsic regulation; that is, those who are more self-compassionate for poor academic performance rely less on external sources of reinforcement to be motivated for a task. This is likely because those who are more self-compassionate have greater internal resources toward ability to self-soothe. Also, self-compassion is focused on the alleviation of personal suffering, and this may reduce the need for additional contributions to their motivation. Self-compassion was also negatively related to introjected regulation, which is another source of extrinsic motivation where individuals are motivated because they have associated guilt or shame with failing to complete the task and are concerned with maintaining their self-esteem or

self-worth. A recent study found that self-compassion was negatively related to the self-conscious emotions of guilt, shame, and pride (Mosewich et al., 2011), which is in line with the theoretical tenets of self-compassion. Self-compassion is not concerned with protecting one's ego, but rather acknowledging personal disappointment and treating it in a non-judgmental or self-critical way (Neff, 2009). As negative emotions like guilt and shame are contrary to the tenets of self-compassion, this finding adds to the literature in support of the relation between self-compassion and well-being (Gilbert, 2005; Neff, 2007a; Neely et al., 2009).

Self-compassion significantly predicted less fear of failure, echoing previous work (Neff et al., 2005), indicating those who reported more self-compassion were less likely to fear failure. Having a kinder, gentler self-attitude related to disappointing outcomes could certainly decrease the stress of a potential failure.

Consistent with one of the most robust findings on the relation between self-compassion and anxiety (Neff et al., 2005; Neff, 2009; Williams et al., 2008), self-compassion also negatively predicted academic anxiety. Stated another way, these results can be interpreted two ways. Individuals who have healthier self-treatment beliefs are: (a) better able to manage their anxiety on academic tasks and cope with stressful situations, or (b) do not generate the stress-inducing beliefs associated with academic anxiety, and therefore do not feel threatened by academic worry. Theoretically, self-compassion offers distance and comfort from excessive worry and anticipated threat. Simply put, self-compassionate students are less likely to beat themselves up when they confront

academic disappointment or failure, and are better equipped to self-soothe when stress arises with a gentler self-treatment and healthier outlook.

Lastly, self-compassion negatively predicted an individual's belief in a fixed (entity) theory of intelligence. Those with a growth (incremental) theory of intelligence believe their skills can improve with practice; however, those with a fixed mentality believe that no amount of hard work can improve one's abilities. As previously discussed, a fixed theory of intelligence has been linked with low self-esteem where psychological damage is connected to disappointing outcomes (Robins & Pals, 2002). A belief in fixed intelligence runs counter to self-compassion, where one will perceive disappointment as something that everyone experiences occasionally and failure does not mean an individual is incapable of improving. Alternatively, an incremental mindset has been correlated with mastery goal orientation (Hong et al., 1999); therefore, it would theoretically follow that an incremental mindset would also be linked with self-compassion as it is based upon the belief that outcomes can improve with effort, and poor outcomes are not internalized to be indicative of ability or self-worth. More research could help to clarify this previously unexplored but intriguing link.

RESEARCH QUESTION 4

Research Question Four was intended to investigate the moderating effect of self-compassion, between FG status and less strategic outcomes on the various learning variables. Since there were no differences, the moderation was not tested. As previously stated, there may be other reasons why FG students are continuing to experience lower academic outcomes like GPA related to contextual variables (i.e., high school academic

preparation, high school intensity, and support for the high school-to-college transition) not measured in this study looking above and beyond FG status.

SUMMARY OF THE FINDINGS

Traditionally, FG students tend to take less rigorous coursework (Chen, 2005), leaving them feeling less confident to perform at the college level. FG students have been found in prior research to not only feel separate from other college students and alone in their poor grades, but to also reach out less to other college students and instructors when they are struggling (Dennis et al., 2005; Lohfink & Paulsen, 2005). At a time when familial support may become very important, FG students also experience challenges when seeking support from their family who might criticize their decision to enroll in college in the first place (Olive, 2008).

In the current study, there were differences looking at the interaction of ethnicity and FG status. Specifically, Asian FG students were found to be less strategic learners related to their fixed theory of intelligence. FG students in general also perceived themselves as more isolated in coping with academic disappointment. FG students' maladaptive learning beliefs and processes, coupled with their ability to cope with low grades, may be one reason why they have a worse GPA than non-FG students. Feeling alone and separate in their struggles, FG students might not understand that failing is a part of learning and something that all students experience on occasion.

While the research question examining self-compassion as a moderator of FG status on the learning variables was not significant on fixed theory of intelligence, this study did find that self-compassion was significantly related to ten out of eleven of the

learning variables. Therefore, having self-compassion appears to be another facet of strategic learning. Within the strategic learning literature, affective responses to poor learning outcomes (i.e. anxiety, fear of failure, and shame) have been examined for their impact on achievement; however, more research is needed about how to cope with poor outcomes when these emotions arise. Self-compassion offers important coping strategies that could benefit a number of subgroups as they face academic disappointment, especially populations who tend to struggle with low achievement. Failure can be incredibly discouraging for individuals who beat themselves up when they fail. Instead of giving up and dropping out of college, learning how to deal with disappointment in a healthy way may offer students a new framework to handle low grades.

LIMITATIONS

The first limitation to this study is the generalizability of the study results. The university where data were collected is a tier research-one institution that enrolls very competitive students, academically. According to their first generation student profile, Engle and Tinto (2008) named several characteristics that might be more common at less academically rigorous institutions, including community colleges such as non-traditionally aged, non-native English speakers, non-citizens, and GED earners. The current study participants represent a unique kind of first generation student who does not conform to the traditional notion of a first generation student. The results may not generalize to all first generation students, but rather those who enroll in a competitive post-secondary program right out of high school.

Further, given the high percentage (73%) of students at this institution who graduated in the top 10% of their high school class (Office of Admissions Research, 2011), it is likely that those FG students who enroll at UT-Austin have benefitted from a supportive network of individuals who have helped them transition to college. This sample contains more competitive FG students, and in addition to not generalizing to all FG students, this unique type of FG student with a better high school GPA and higher standardized test scores than what is typically seen in FG students could confound the results of this study as there were no differences by FG status.

The university's admissions records further delineate the possible confound for these results, illustrating the degree of academic selectivity of the FG student population in this study. For example, the average SAT score for incoming freshmen is over 400 points higher than the national average. The demographic profile also follows different patterns than those Engle and Tinto (2008) described; students at this institution are more traditional in age (overwhelmingly 18-22) and dependent status (unmarried, without children). While this study raises some important questions, it might be that replicating the study on a more typical FG population would yield different results.

Moreover, the sampling of students also presents another limitation. Participants were selected based primarily on subject pool assignment, so that only students who registered for Introduction to Psychology or an Educational Psychology course were selected to participate in the study, which might have implications for sampling bias. Additionally, these students may be more psychologically-minded and introspective than students who enroll in other courses. In an effort to increase the first generation student

participants, 41 participants were recruited through convenience sampling through student support programs. Although a chi square test was performed to assess differences on the learning outcomes within FG status, these students may be impacted by participating in programs aimed to ameliorate their first generation risk status with additional resources (i.e., tutoring, career planning, peer support meetings). Responses from the students may be affected by a number of variables interacting with the variables assessed on the online self-report questionnaire.

Finally, although commonly done in research on FG students (Choy, 2001), operationalizing first generation students as those whose parents have not completed a four-year degree includes students with parents who may have *some* college experience. There may be FG students who have benefitted from parents who have some experience with the high school-to-college transition, financial aid/college applications, and academic networking however there are a wider variety of experiences including the transitions between semesters and years requiring additional support. For example, one growing area of research is dedicated to understanding "the leaky pipeline" (Tobolowsky & Cox, 2007a), or challenges uniquely associated with the sophomore year of college such as indecisiveness, poor course selection, and goal disengagement (Gardner, 2000; Hunter, Gardner, Tobolowsky, Evenbeck, & Pattengale, 2009). Parents who only took a few college courses and did not experience their own struggles during their sophomore years, for instance, may not be as aware of the difficulty of this transition. This is especially relevant as 75% of the students in this study are in their sophomore year of college and beyond. So, even though FG students in this sample may have parents with

some firsthand understanding of the college experience, it is appropriate to operationalize FG students as having parents with a 4-year degree because the parental resources that might benefit the majority of this sample the most would be derived from their parents with the most similar college experiences as their own. Four-year universities and colleges present different challenges than 2-year colleges, so stressing the importance of advice and support on the complete 4-year college experience is likely to be the most helpful.

Another benefit of this operationalization of parents obtaining a 4-year degree is it provides analyses on students who would not be considered FG students in other research. In other studies, FG students have also been classified as parents who have no college experience (2- or 4-year) or parents who have some college experience (but no degree). This study enables a more inclusive range of FG students to be investigated: academically competitive students of parents with either some four-year college experience, two-year college degrees, or less.

Future Research Directions

The current study adds to a relatively small body of research on self-compassion and college students. Because self-compassion has been linked to adaptive learning behaviors and psychological functioning for college students (Neff et al., 2005; Neff et al., 2007a), it is important to see how self-compassion can be incorporated in the college experience. There are many follow-up studies that would add to the empirical understanding and application of self-compassion for college students. In particular, looking at self-compassion in learning frameworks courses to see how instruction of self-

compassion impacts strategic learning and achievement is one possible future area of research. This type of course would be especially useful to test the impact of self-compassion on these outcomes because diverse populations of students ranging greatly in academic standing enroll in these courses. Since FG students appeared to have some positive strategic learning beliefs and cognitive processes but lower GPAs in the current study, it will be helpful to see how self-compassion impacts students in varying degrees of academic standing: do students in good academic standing – a 2.0 GPA or higher – have more self-compassion than students in poor academic standing? Earning low grades can be demoralizing, especially when an individual expected to perform better. Since there is some evidence that self-compassion is linked with strategic learning, there are additional areas of future research and application not only in college classes but also in support programs serving college students at risk of low performance.

Another area of future research is expanding the method and variables of interest in the current study. Looking at the method, while self-report questionnaires are useful to get a sense of students' beliefs, cognitive processes, perception of their self-treatment behaviors, and their reported learning behaviors, it may also be of interest to conduct a qualitative analysis with focus group interviews to delve deeper into participants' responses. Of particular interest are FG students' high school and cultural experiences. Related to high school - did they participate in any college support programs while in high school? Did they receive assistance with their college and financial aid applications? If so, how helpful did they find that assistance? When they entered college, did they feel academically prepared? Now that they have been in college for a few semesters, did their

impression of their high school preparation change? When examining how culture impacts strategic learning beliefs, questions surrounding stereotypes are especially salient – what is your perception of how students like you learn best in college? How does being a member of your group influence your learning beliefs and practices? Answers to these questions may help trace the origins of FG students' strategic learning beliefs and cognitive processes, adding to the research suggesting they are unprepared for college. In this vein, it would be also beneficial to follow the present study's participants longitudinally (over the course of their college career) to assess retention and achievement (GPA) on those who scored high and low on self-compassion and see if there are significant differences between the two groups over time.

Another area of future research would be to include self-compassion when examining some of the cultural and psychosocial constructs in college student research. As mentioned above, imposter syndrome, self-determination, belongingness, academic socialization, and stereotype threat are a few variables related to negative self-beliefs and self-treatment that are likely to generate interesting and useful findings when interacting with self-compassion. Moreover, based on the significant differences between ethnic groups, it seems that delving further into the interactions among cultural variables, self-compassion for poor academic performance, and FG status could provide important implications for policy and practice for some subgroups of students.

Lastly, given that the university enrolls a competitive student body with a unique first generation student demographic, it will be helpful to compare first generation

students from the university to students from different types of two- and four-year institutions in the nearby area.

CONCLUSION

Despite the number of federal efforts and resources aimed at diminishing the gaps between FG and non-FG students, differences in achievement and retention remain (Chen, 2005; Vuong, Brown-Welty, & Tracz, 2010). FG students, or those who were striving to be the first in their family to complete a four-year degree, often face challenges directly and indirectly related to their FG status such as: low financial support, low familial support, insufficient high school curriculum rigor leading to ill preparation for college-level work, limited knowledge of the high school-to-college transition potentially complicating college adjustment (Fischer, 2007), and other issues. As a result of being first in their family to attend college, many FG students carry the burden of additional pressure to succeed because they want to make their family and other support systems proud. They also may want to succeed in spite of individuals who have criticized their decision to enroll in college.

The background of a first generation student is multi-faceted and unique, as is their demographic profile (when compared to non-FG students). FG students are more likely to be of an ethnic minority status, from a low-income family, and they are more likely to be female (Engle & Tinto, 2008). While enrolled in college, all of the aforementioned factors with which FG students have to contend have been found to influence FG students' strategic learning and coping beliefs and cognitive processes (Pizzolato, 2004; Seidman, 2005). Additionally, as previously stated, research has shown

that they are twice as likely to drop out of college than their peers with both parents having completed college (Chen, 2005). Of particular concern for the current study were FG students' damaging, critical self-beliefs (Contreras, 2005; Penrose, 2002; Pizzolato, 2004; Ramos-Sanchez & Nichols, 2007). FG students are more likely to isolate themselves when they fail, believing that they are not "college material" (Striplin, 1999). For these reasons, it was hypothesized that FG students would have less strategic learning beliefs and cognitive processes, and less self-compassion than non-FG students.

Four major findings emerged from this study. First, FG students did indeed have lower GPAs than non-FG students, indicating that academic performance is related to FG status in some way and that FG students are still doing worse in college than non-FG students. Despite FG students reporting significantly lower GPAs than non-FG students, a second major finding of the current study is that Asian FG students expressed *less* strategic learning beliefs and cognitive processes than non-FG students in their implicit theory of intelligence revealing a fixed (rather than growth) mindset. These findings are in line with previous research on Asian college students' maladaptive learning beliefs, where these students need help but fear asking for it. Asian college students, in particular, face comparisons with the Model Minority Stereotype which could significantly interfere with strategic learning practices, especially when seeking help could be construed as a sign of weakness for Asian college students. While few studies have examined Asian students' help-seeking behaviors in learning, a wealth of data exist on Asian students' under-utilization of mental health services and the stigmatized perception of seeking help for challenges related to mental health (Volet & Karabenick, 2006). It could be that,

overall, Asian students are less reliant on others when they are struggling and prefer to deal with it on their own. More research is needed on Asian college students' self-regulatory learning behaviors related to help-seeking.

Returning to a general discussion of FG student outcomes on the learning variables, FG students did not, in fact, have worse outcomes on their learning beliefs and cognitive processes. One possible confound for this study was this sample of FG students was enrolled at a very competitive institution and given that 73% of students graduated in the top 10% of their high school classes, it is likely many of the students in this sample were among the top 10% of their graduating classes. Despite their success in high school, FG students still performed lower than their non-FG peers. More research is needed to understand what variables contribute to FG students' lower GPAs, especially those enrolled in prestigious universities.

The third major finding of this study is first generation students felt significantly more isolated when coping with academic failure. Experiencing emotional isolation could be complicated by the fact FG students are more likely to be ethnic minorities on a competitive college campus. Lacking a supportive group of peers who are perceived to have experienced similar challenges in their lives could exacerbate feeling separate and alone. Moreover, even if there are plenty of available resources on campus from which students can obtain academic help and garner emotional support, FG students are more likely to *perceive* they are alone in their struggles.

These isolating experiences may begin to change for one FG group. Despite the Hispanic population's dramatic growth over the past decade accounting for one-half of

the total growth rate in the United States (U.S. Bureau of the Census, 2007), only 26.6% of Hispanics between the ages of 18 to 24 were enrolled in college, compared to 42.6% of Whites and 33.1% of Blacks (NCES, 2009). There are still gaps in college enrollment for minority populations, which could increase feelings of isolation among FG students who are more likely to be ethnic minorities and could feel underrepresented at their colleges and universities. This may change, as Hispanic students are expected to increase in their college enrollment by 38% (Hussar & Bailey, 2009), so it will be important to monitor how this increase impacts college outcomes for Hispanic students. While Hispanic students may begin to see more and more students like them on campus, this change may only impact social isolation, still leaving room for problematic emotional isolation.

Lastly, the fourth major finding of this study is self-compassion was linked with many different types of strategic learning variables. Past research has demonstrated that self-compassion, or kind and gentle self-treatment in the face of personal disappointment, has been found to lessen the effects of anxiety (Neff et al., 2005) and it has been linked with adaptive learning behaviors (Neff et al., 2005). In the current study, self-compassion was positively related to strategic learning beliefs and processes and negatively related to non-strategic learning beliefs and processes, except identified regulation. Self-compassion positively predicted academic self-efficacy, mastery goal orientation, and intrinsic motivation, and negatively predicted external regulation, introjected regulation, performance-approach goal orientation, performance-avoidance goal orientation, fixed theory of intelligence, academic anxiety, and fear of failure. Because of this, the findings from this study have some important applications.

The learning variables investigated are similar to those related to learning frameworks and study skills college courses. The curriculum covers many ways to strategically approach learning tasks through goal orientation, test-taking strategies, time management skills and so forth; however, there is less direct instruction on how to cope with facing disappointing outcomes other than "seek help". Currently, self-compassion instruction is absent from learning frameworks courses and it appears that self-compassion could be a very powerful tool for FG and non-FG students alike.

While a diverse group of students enroll in these courses, many students who are in poor academic standing or on academic probation are mandated to take the courses as a condition of enrollment. Teaching these students how to cope with academic disappointment in a healthy, adaptive way may help buffer their low GPAs. Moreover, because self-compassion was significantly correlated with ten of the eleven learning variables in this study, teaching self-compassion for poor academic performance in these college courses may influence students' motivation to pursue their goals and improve students' mindsets as they approach learning tasks. As has been shown with previous research, increasing motivation could lead to gains in achievement and even retention. Further, incorporating self-compassion in a college curriculum could help students gain awareness of their self-treatment belief and cognitive processes, while replacing harsh self-criticism with kind, gentle understanding. Self-compassion has been shown to impact psychological outcomes, but it could also influence academic outcomes, helping to bridge the gap for students who have damaging self-beliefs leading to maladaptive coping mechanisms and overall worse academic outcomes.

One consideration for the current study is that there may be other variables influencing these past findings that are different from first generation status itself. First generation status has been correlated with being female and having a lower socioeconomic status (Engle & Tinto, 2008), while there were not negative findings associated with FG status on all of the learning variables, it may be that the mechanism contributing to harsher self-beliefs discussed in FG student literature are variables linked with FG status, in addition to FG status itself. There are several ways this sample differs from the national profile of FG students (more traditionally college aged, higher standardized test scores) and some ways that it is similar (lower SES, higher ethnic minority membership, lower GPAs). To account for these characteristics, the main effects of all control variables on the learning variables and self-compassion were assessed during preliminary analyses. A chi square test of differences revealed that students who were classified as FG were more likely to report a family income of under $50,000. Results revealed that males had significantly more self-compassion than females, and participants with lower reported family income (under $50,000) had significantly less self-compassion than participants with higher reported family income (over $50,000). There may be other factors related to negative self-attitudes found in the literature such as sex or low socioeconomic status that are sometimes conflated with FG status. As this is the first study that has investigated the link between motivational and affective variables related to self-compassion for FG college students, more research is needed to understand the connections found in this study and in previous research.

Appendix A

Academic Self-Regulation Questionnaire (SRQ-A)

The Academic Self-Regulation Questionnaire (SRQ-A) contains 32 Likert-type items about why students engage in learning-related activities. The Cronbach's alphas for the four subscales are: Intrinsic Motivation (.83), External Regulation (.75), Introjected Regulation (.83), Identified Regulation (.80). Responses range from "Not true at all" to "Very true. "

A. Why do I complete the homework my instructor assigns?

1. Because I want the instructor to think I'm a good student.
2. Because my instructor will think less of me if I don't.
3. Because it's fun.
4. Because I will feel bad about myself if I don't do it.
5. Because I want to understand the subject.
6. Because that's what I'm supposed to do.
7. Because I enjoy doing my homework.
8. Because it's important to me to do my homework.

B. Why am I actively engaged in my college courses (i.e., completing in-class assignments, asking questions, and taking notes)?

9. So that the instructor won't single me out.
10. Because I want the instructor to think I'm a good student.
11. Because I want to learn new things.
12. Because I'll be ashamed of myself if it didn't get done.
13. Because it's fun.
14. Because that's what I'm supposed to do.
15. Because I enjoy being actively engaged.

16. Because it's important to me to be actively engaged.

C. Why do I try to answer hard questions in class?

17. Because I want the other students to think I'm smart.
18. Because I feel ashamed of myself when I don't try.
19. Because I enjoy answering hard questions.
20. Because that's what I'm supposed to do.
21. To find out if I'm right or wrong.
22. Because it's fun to answer hard questions.
23. Because it's important to me to try to answer hard questions in class.
24. Because I want the instructor to praise or reward me.

D. Why do I try to do well in college?

25. Because that's what I'm supposed to do.
26. So my instructors will think I'm a good student
27. Because I enjoy succeeding in college.
28. Because I will get in trouble if I don't succeed.
29. Because I'll feel really bad about myself if I don't do well.
30. Because it's important to me to try to do well in school.
31. Because I will feel really proud of myself if I do well.
32. Because I might get recognition or a reward if I do well.

Appendix B

Patterns of Adaptive Learning Skills - The Academic Efficacy Scale

The Academic Self-Efficacy Scale contains 5 Likert-type items about students' perceptions of their competence to do their class work. The Cronbach's alpha is .90. Responses range from "Not true at all" to "Very true. "

1. I'm certain I can master the skills taught in my classes this year.
2. I'm certain I can figure out how to do the most difficult schoolwork.
3. I can do almost all my schoolwork if I don't give up.
4. Even if my schoolwork is hard, I can learn it.
5. I can do even the hardest work in my classes if I try.

Appendix C

The Implicit Theories of Intelligence Scale

The Implicit Theories of Intelligence Scale contains 3 reverse-scored items designed to assess if students have a malleable (growth) or fixed mindset regarding intelligence. This scale has a Cronbach's alpha of .91. Responses on a 6-point Likert scale range from "Strongly disagree" to "Strongly agree".

1. You have a certain amount of intelligence and you really can't do much to change it.
2. Your intelligence is something about you that you can't change very much.
3. You can learn new things, but you can't really change your basic intelligence.

Appendix D

Patterns of Adaptive Learning Skills - The Goal Orientation Scale

The Goal Orientation Scale from Patterns of Adaptive Learning Skills contains 3 subscales (Mastery, Performance-Approach, and Performance-Avoidance) with 5 Likert-type items each for a total of 15 items about students' perceptions of their motivation to do their class work. The Cronbach's alphas are: Mastery (.88), Performance-Approach (.87), and Performance-Avoidance (.81). Responses range from "Not true at all" to "Very true."

Mastery subscale items

1. It is important for me that I thoroughly understand my coursework.
2. One of my goals is to master a lot of new skills this year.
3. One of my goals in my courses is to learn as much as I can.
4. It is important to me that I improve my skills this year.
5. It is important to me that I learn a lot of new concepts this year.

Performance-Approach subscale items

1. One of my goals is to show others that I am good at my coursework.
2. It is important to me that I look smart compared to others in my courses.
3. One of my goals is to show others that coursework is easy for me.
4. One of my goals is to look smart in comparison to the other students in my class.
5. It is important to me that other students in my courses think I am good at my coursework.

Performance-Avoidance subscale items

1. It is important to me that others do not think I am a poor student.
2. It is important to me that my teacher does not think I know less than other students in my class.
3. It is important to me that I do not look stupid in class.
4. One of my goals in class is to avoid looking like I have trouble doing the work.
5. It is important that my family or friends do not think I am doing poorly in my courses.

Appendix E

Learning and Study Strategies Inventory

The Learning and Study Strategies Inventory (LASSI) contains 80 items in 10 subscales designed to assess how students learn and study (Anxiety, Attitude, Concentration, Information Processing, Motivation, Self-Testing, Selecting Main Ideas, Study Aids, Test-taking Strategies, and Time Management). Students rate themselves according to how well the statement describes them on a 5-point Likert scale from "Not at all typical of me" to "Very much typical of me". Only the 8-item Anxiety subscale will be used in the current study measuring academic anxiety and has a Cronbach's alpha of .90.

Anxiety sample items

I feel very panicky when I take an important test.

When I am studying, worrying about doing poorly in a course interferes with my concentration.

(Full scale is prohibited from being appended to dissertation material by the publisher, H & H Publishing).

Appendix F

Self-Compassion Scale – adapted for poor academic performance

Students were first asked to recount a recent academic experience where they felt they got a "poor" grade. Directions are as follow: "Please describe, in detail, a recent academic college experience when you felt you got a poor grade. This could be that you were dissatisfied with your grade but didn't fail or that you, in fact, earned a failing grade. You may include information such as the type of academic task, the college class, your grade, your response to your grade, and so forth. Use as much space as you need."

Students next responded to the survey questions. Directions were as follows: "Please read each statement carefully before answering. Indicate how often you typically behave in the stated manner when you think you earned a poor grade (even if you have not received your grade back yet). Then, select the response that best describes your behavior as a student." Responses range on a 5-point Likert scale from "Almost never" to "Almost always". The Cronbach's alpha is .88 for the Self-Compassion Scale. Subscales (with alphas) include: Self-Kindness (.82) Items: 5, 12, 19, 23, 26; Self-Judgment (.82) Items: 1, 8, 11, 16, 21; Common Humanity (.29) Items: 3, 7, 10, 15; Isolation (.84) Items: 4, 13, 18, 25; Mindfulness (.73) Items: 9, 14, 17, 22; Over-identified (.10) Items: 2, 6, 20, 24. Starred (*) items are reverse scored.

1. I'm disapproving and judgmental about myself as a student.*
2. I tend to obsess and fixate on what went wrong.*
3. I see these difficulties as part of life that all students go through.
4. It tends to make me feel more separate and cut off from other students.*
5. I try to be supportive towards myself as a student.
6. I become consumed by feelings of inadequacy.*
7. I remind myself that there are lots of other students in the world feeling like I am.
8. I tend to be tough on myself as a student.*
9. I try to keep my emotions in balance.
10. I try to remind myself that feelings of inadequacy are shared by most students.
11. I'm intolerant and impatient towards myself.*
12. I give myself the care I need.
13. I tend to feel like most other students are probably doing better than I am.*

14. I try to take a balanced view of the situation.
15. I try to see my failings as part of the human condition.
16. I get down on myself.*
17. I try to keep things in perspective.
18. I tend to feel like other students must be having an easier time of it.*
19. I try to be kind to myself.
20. I get carried away with my feelings.*
21. I can be a bit cold-hearted towards myself.*
22. I try to approach the experience with curiosity and openness.
23. I'm tolerant of my own flaws and inadequacies as a student.
24. I tend to blow the incident out of proportion.*
25. I tend to feel alone in my failure.*
26. I try to be understanding and patient towards myself as a student.

Appendix G

Success/Failure Questionnaire II

The Success/Failure Questionnaire II is designed to measure the inverse constructs of fear of failure and need to achieve. Only the Fear of Failure subscale will be used for this proposed study. The Fear of Failure subscale has a Cronbach alpha of .77. Responses are on a 5-point Likert scale and range from *Strongly Agree* to *Strongly Disagree.*

1. When I start doing poorly on a task, I feel like giving up.

2. If given a choice, I have a tendency to select a relatively easy task rather than risk failure.

3. When I fail at a task, I am even more certain that I lack the ability to perform the task.

4. When I fail, I often ask myself why I failed.

5. Sometimes I think it is better not to have tried at all, than to have tried and failed.

6. I sometimes put forth only a small amount of effort toward accomplishing an important task, even though I know success is possible.

7. When I am interrupted in an important task, I find that I easily forget about the project I was working on.

8. When I experience failure, I expect to receive punishment from someone.

9. I usually find that I am well prepared for success on a task that I value, but I do not perform that task well under the pressure of the moment.

10. I usually rely heavily upon feedback from others when I attempt to determine if a task is easy or hard.

Appendix H

Demographic data

Directions: Please tell us a little about yourself by answering the following questions.

1. Please identify your racial and ethnic backgrounds.

How would you describe your racial/ethnic background? Check one.
☐African American/Black ☐Hispanic/Latin American/Chicano(a) ☐Native American
☐Asian/Asian American ☐Caucasian/European American
☐Multiracial (Please specify) _____ ☐Other _____

2. What is your gender? ☐ Male ☐Female

3. How old are you? _____

4. What is the highest level of education your parents/guardians have COMPLETED?

Mother/Guardian's Education
☐Middle School ☐High School
☐Community College/Associate's Degree ☐College/Bachelor's Degree
☐Vocational/Technical School ☐Advanced Degree (ex. MD, MA, JD, PhD)

Father/Guardian's Education
☐Middle School ☐High School
☐Community College/Associate's Degree ☐College/Bachelor's Degree
☐Vocational/Technical School ☐Advanced Degree (ex. MD, MA, JD, PhD)

5. Estimate your family's annual income.
☐$0-$25,000 ☐$25,001-$50,000 ☐$50,001-$75,000
☐$75,001-$100,000 ☐$100,001-$125,000 ☐$125,001-$150,000
☐$150,001 and above

6. Based on a 4.0 scale, estimate your current grade point average (GPA). _____

7. If you are completing this survey for Subject Pool credit, in which class are you enrolled? ☐EDP _____ ☐PSY _____

8. If you are a Subject Pool participant, please enter your UTeid: _____

9. Do you participate in academic or student support programs on campus? If so, please list the program(s) (i.e. Longhorn Link, TIP, Gateway Scholars)
_____

Appendix I

IRB APPROVED ON: 09/15/2011 DO NOT USE AFTER: 07/08/2012
IRB Protocol # [redacted]

Consent to Participate in Research Identification of the Researcher and Purpose of the Study

You are invited to participate in a research study, entitled "**Everybody Fails Sometimes: Exploring Relations Between Self-Compassion for Poor Academic Performance, First Generation Status, and the Strategic Learning Beliefs and Processes of College Students**". The study is being conducted by Jaimie M. Krause, [redacted], phone: [redacted], email: [redacted].

The purpose of this study is to understand the relationship among self-compassion for poor academic performance and students' first generation status and to determine which learning experience factors are related to a student's degree of self-compassion. Your participation in the study will contribute to a better understanding of the ways in which college students' academic-specific self-care impacts their perceptions about learning and their performance**.** You are free to contact the investigator at the above address and phone number to discuss the study. You must be at least 18 years old to participate.

If you agree to participate:

- The survey will take approximately 60 minutes of your time.
- If you agree to participate, you will complete a survey about your learning processes, study strategies, and perceptions about yourself as a learner.
- You **may** be compensated. PSY and EDP students who are taking this survey to fulfill subject pool requirements will receive .5 research credits. [redacted] students who are enrolled in either of the PSY or EDP courses can receive research credit. Longhorn Link and TIP Scholars who are not enrolled in PSY and EDP courses are eligible to win one $25 Target gift card upon agreement to be in the study.

Subject pool participants also have the option to complete the alternate assignment for the same amount of credit and requiring the same amount of time and effort as being in a research study. Contact your instructor or subject pool coordinator for more information about this option.

Risks/Benefits/Confidentiality of Data

Possible risks of participation in this study include possible loss of confidentiality, however protective measures will be taken to prevent this loss of confidentiality including any of your identifying information will be stripped from the final dataset. There will be no costs for participating, nor will you benefit from participating. Your name and email address will be kept during the data collection phase for tracking purposes only. A limited number of research team members will have access to the data during data collection.

Participation or Withdrawal

Your participation in this study is voluntary. You may decline to answer any question and you have

the right to withdraw from participation at any time. Withdrawal will not affect your relationship with [redacted] in anyway. If you do not want to participate either simply stop participating or close the browser window.

Contacts

If you have any questions about the study or need to update your email address contact the researcher Jaimie M. Krause at [redacted] or send an email to [redacted]. This study has been reviewed by [redacted] Institutional Review Board and the study number is [redacted].

Questions about your rights as a research participant.

If you have questions about your rights or are dissatisfied at any time with any part of this study, you can contact, anonymously if you wish, the Institutional Review Board by phone at [redacted] or email at [redacted].

If you agree to participate, please click " I agree" or "I do NOT agree" on the following link: [redacted]

The password for the study is [redacted].

Thank you.

Please print a copy of this document for your records.

Appendix J

Invitation to Participate Letter

Dear [redacted] student:

You are invited to participate in a research study about how students cope with low grades. I am an Educational Psychology student conducting a survey that will contribute to a better understanding of the role of self-compassion in coping with bad grades, especially for first generation students. If you agree to be in this study, you will complete one 60-minute survey responding to questions about coping with bad grades and how you learn. If you are completing this survey for Subject Pool credit and you do not agree to be in the study, you may contact your subject pool coordinator for instructions for completing the alternate assignment.

Risks to participants are considered minimal. There will be no costs for participating, however for completing the survey your name will be entered into a drawing where one lucky [redacted] participant will win a $25 Target gift card (provided you are not completing this survey to receive Subject Pool credit)! Additionally, your privacy will also be protected and only I will have access to the information you provide. Your name and email address will not be paired with your responses once the data is analyzed.

Your participation in this survey is voluntary. You may decline to answer any question and you have the right to withdraw from participation at any time without penalty. If you wish to withdraw from the study or have any questions, please contact me at: [redacted]. You may also request a hard copy of the survey from the following contact information: Jaimie Krause, [redacted]

This study has been reviewed and approved by [redacted] Institutional Review Board. If you have questions about your rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact - anonymously, if you wish - the Institutional Review Board by phone at [redacted] or email at [redacted]

If you encounter any problems while completing the survey, please send an email to [redacted]

Please click on the following link to gain access to the survey: [redacted]

Thank you so much for your time and valuable input.

Sincerely,

Jaimie M. Krause

Appendix K

Table 14.

Regression Examining Extrinsic Regulation

Step			Standardized Coeff.	Change Statistics	
		Std. Error	β	R^2	R^2 Δ
1	(Constant)	.418		.050	--
	Gender	.079	.081		
	Age	.016	-.199***		
	GPA	.063	.012		
2	(Constant)	.419			
	SCS	.010	-.170***	.078	.027

Note. *$p < .05$. **$p < .01$. ***$p \leq .001$.

Appendix L

Table 15.

Regression Examining Introjected Regulation

Step		Standardized Coeff.		Change Statistics	
		Std. Error	β	R^2	R^2 Δ
1	(Constant)	.462		.052	--
	Gender	.087	.106*		
	Age	.017	-.173***		
	GPA	.070	.072		
2	(Constant)	.462			
	SCS	.011	-.184***	.084	.032

Note. *$p < .05$. **$p < .01$. ***$p < .001$.

Appendix M

Table 16.

Regression Examining Identified Regulation

Step		Standardized Coeff.		Change Statistics	
		Std. Error	β	R^2	R^2 Δ
1	(Constant)	.424		.065	--
	Gender	.080	.129**		
	Age	.016	-.135**		
	GPA	.064	.151**		
2	(Constant)	.430			
	SCS	.010	.091	.073	.008

Note. *$p < .05$. **$p \leq .01$. ***$p < .001$.

Appendix N

Table 17.

Regression Examining Mastery Goal Orientation

Step			Standardized Coeff.	Change Statistics	
		Std. Error	β	R^2	R^2 Δ
1	(Constant)	.447	--	.072	--
	Gender	.085	.098†		
	Age	.017	-.094		
	GPA	.070	.143**		
	Family Income	.098	.139*		
	White	.103	-.024		
	Hispanic	.110	.110		
2	(Constant)	.453	--		
	SCS	.011	.107*	.082	.011

Note. †p ≤ .06 *$p \leq .05$. **$p \leq .01$. ***$p < .001$.

Appendix O

Table 18.

Regression Examining Performance-Approach Orientation

Step			Standardized Coeff.	Change Statistics	
		Std. Error	β	R^2	R^2 Δ
1	(Constant)	.551	--	.007	--
	Age	.022	-.011		
	GPA	.090	-.086		
2	(Constant)	.550	--		
	SCS	.014	-.240***	.062	.054

Note. *p < .05. **p < .01. ***p < .001.

Appendix P

Table 19.

Regression Examining Performance-Avoidance Orientation

Step			Standardized Coeff.	Change Statistics	
		Std. Error	β	R^2	R^2 Δ
1	(Constant)	.489	--	.022	--
	Age	.020	-.144**		
	GPA	.080	-.038		
2	(Constant)	.478	--		
	SCS	.012	-.314***	.115	.093

Note. *p < .05. **p < .01. ***p < .001.

Appendix Q

Table 20.

Regression Examining Fixed Theory of Intelligence

Step			Standardized Coeff.	Change Statistics	
		Std. Error	β	R^2	R^2 Δ
1	(Constant)	.776	--	.061	--
	Gender	.148	-.119*		
	Age	.029	-.105*		
	GPA	.120	.105*		
	Black	.309	-.023		
	Asian	.181	.125*		
	Hispanic	.171	-.054		
2	(Constant)	.778			
	SCS	.018	-.171***	.088	.027

Note. †p ≤ .06 *$p \leq .05$. **$p < .01$. ***$p \leq .001$.

Appendix R

Table 21.

Regression Examining Academic Self-Efficacy

Step			Standardized Coeff.	Change Statistics	
		Std. Error	β	R^2	R^2 Δ
1	(Constant)	.445	--	.037	--
	Gender	.084	-.140**		
	Age	.017	.055		
	GPA	.067	.117*		
2	(Constant)	.425	--		
	SCS	.010	.350***	.152	.115

Note. *p < .05. **p < .01. ***p < .001.

Appendix S

Table 22.

Regression Examining Academic Anxiety

Step			Standardized Coeff.	Change Statistics	
		Std. Error	β	R^2	R^2 Δ
1	(Constant)	.570	--	.096	--
	Gender	.107	.188***		
	Age	.021	-.072		
	GPA	.086	-.236***		
2	(Constant)	.475	--		
	SCS	.011	-.564***	.394	.299

Note. *$p < .05$. **$p < .01$. ***$p < .001$.

Appendix T

Table 23.

Regression Examining Fear of Failure

Step			Standardized Coeff.	Change Statistics	
		Std. Error	β	R^2	R^2 Δ
1	(Constant)	.349	--	.099	--
	Age	.014	-.175***		
	GPA	.058	-.165**		
	Asian	.157	.204*		
	Hispanic	.151	-.007		
	White	.147	-.014		
2	(Constant)	.310	--		
	SCS	.008	-.486***	.320	.221

Note. *$p < .05$. **$p < .01$. ***$p \leq .001$.

References

Adams, C. E., & Leary, M. R. (2007). Promoting self-compassionate attitudes toward eating among restrictive and guilty eaters. *Journal of Social and Clinical Psychology, 26,* 1120-1144.

Aiken, L. S., & West, S. G. (1991). *Multiple Regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.

Allen, A., & Leary, M. R. (2010). Self-compassion, stress, and coping. *Social and Personality Psychology Compass, 4*(2), 107-118.

Akin, A. (2009). Self-compassion and submissive behavior. *Education and Science, 34,* 138-147.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (Revised 4th ed.). Washington, DC: Author.

Ames, C., & Archer, J. 1988. Achievement goals in the classroom: Student learning strategies and motivation processes. *Journal of Education Psychology, 80,* 260 - 267.

Ashcraft, M. H. & Moore, A. M. (2009). Mathematics anxiety and the affective drop in performance. *Journal of Psychoeducational Assessment, 27,* 197-205.

Aspelmeier, J. E., Love, M. M. McGill, L. A., Elliott, A. N., & Pierce, T. W. (2012). Self-esteem, locus of control, college adjustment and GPA among first- and continuing-generation students: A moderator model of generational status. *Research in Higher Education,* 1-27.

Bailey, M. J. & Dynarski, S. M. (2011). *Gains and gaps: Changing inequality in U.S. college entry and completion.* Cambridge, MA: National Bureau of Economic Research.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: Freeman.

Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology, 52,* 1-26.

Beery, R. G. (1975). Fear of failure in the student experience. *Personnel & Guidance Journal, 54*(4), 191-203.

Bennett-Goleman, T. (2001). *Emotional alchemy: How the mind can heal the heart.* New York, NY: Three Rivers Press.

Bishop, S. R., Lau, M., Shapiro, S., Carlson, L., Anderson, N. D., Carmody, J., et al. (2004). Mindfulness: A proposed operational definition. *Clinical Psychology Science and Practice, 11*, 191–206.

Bong, M. (1997). Generality of academic self-efficacy judgments: Evidence of hierarchical relations. *Journal of Educational Psychology, 89*(4), 696-709.

Borich, G., & Jemelka, R. (1981). Defintions of program evaluation and their relation to instructional design. *Educational Technology*, August 1981, 31-38.

Bowman, N. A. (2010). The development of psychological well-being among first-year college students. *Journal of College Student Development 51*(2), 180-200.

Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its

role in psychological well-being. *Journal of Personality and Social Psychology, 84,* 822–848.

Bui, K. V. (2002). First-generation college students at a four-year university: Background characteristics, reasons for purposing higher education, and first-year experiences. *College Student Journal, 36,* 3–11.

Burley, H., Butner, B., Anderson, C. W., & Siwatu, K.O. (2009). Predicting bachelor's degree attainment for developmental math students. *NADE Digest, 4*(2), 35-46.

Butterfield, F. (1986). Why Asians are going to the head of the class. New York Times, 19-24.

Byrd, K.L., & MacDonald, G. (2005). Defining college readiness from the inside out. *Community College Review*, *33*(1), 22-37.

Caraway, K., Tucker, C. M., Reinke, W. M., & Hall, C. (2003). Self- efficacy, goal orientation, and fear of failure as predictors of school engagement in high school students, *Psychology in the Schools, 40,* 417–427.

Cates, G., & Rhymer, K. (2003). Examining the relationship between mathematics anxiety and mathematics performance: An instructional hierarchy perspective, *Journal of Behavioral Education. 12*(1), 23-34.

Chemers, M. M., Hu, L., & Garcia, B. F. (2001). Academic self-efficacy and first-year college student performance and adjustment, *Journal of Educational Psychology, 93*(1), 55-64.

Cho, S., Hudley, C., Lee, S., Barry, L., & Kelly, M. (2008). Roles of gender, race, and SES in the college choice process among first-generation and non first-generation students. *Journal of Diversity in Higher Education, 1*(2), 95-107.

Choy, S. P. (2001). *Findings from the Condition of Education 2001: Students whose parents did not go to college: Postsecondary access, persistence, and attainment.* Washington, DC: U.S. Department of Education, National Center for Educational Statistics.

Christopher, J. C., Christopher, S. E., Dunnagan, T., & Schure, M. (2006). Teaching self-care through mindfulness practices: The application of yoga, meditation, and qigong to counselor training. *Journal of Humanistic Psychology, 46*(4), 494-509.

Clark, M. R. (2005). Negotiating the freshman year: Challenges and strategies among first-year college students. *Journal of College Student Development, 46*(3), 296-316.

College Board. (2008). College-bound Seniors: 2010 Profile of SAT and Achievement Test Takers. New York: College Entrance Examination Board.

Collier, P. J. & Morgan, D. L. (2008). ‘‘Is that paper really due today?’’: Differences in first-generation and traditional college students’ understandings of faculty expectations. *Journal of Higher Education, 55,* 426-446.

Contreras, F. E. (2005). Access, achievement, and social capital: Standardized exams and the Latino college-bound population. *Journal of Hispanic Higher Education, 4*(3), 197-214.

Contreras, F., & Gándara, P. (in press). Latinas/os in the Ph.D. pipeline: A case of historical and contemporary exclusion. In J. Castellanos & A. Gloria (Eds.), *Journey to a Ph.D.: The Latina/o experience in higher education*. Sterling, VA: Stylus.

Conway, D. G. (2007). *The role of internal resources in academic achievement: Exploring the meaning of self-compassion in the adaptive functioning of low-income college students.* Unpublished doctoral dissertation study.

Crocker, J. & Canevello, A. (2008). Creating and undermining social support in communal relationships: The role of compassionate and self-image goals. *Journal of Personality and Social Psychology, 95*, 555-575.

Csíkszentmihályi, M. (1990). *Flow: The psychology of optimal experience*. NY: Harper and Row.

Dennis, J. M., Phinney, J. S., & Chuateco, L. I. (2005). The role of motivation, parental support, and peer support in the academic success of ethnic minority first-generation college students. *Journal of College Student Development, 46*, 223–236.

DeWitz, S. J., Woolsey, M. L., & Walsh, W. B. (2009). College student retention: An exploration of the relationship between self-efficacy beliefs and purpose in life among college students. *Journal of College Student Development, 50*(1), 19-34.

Dweck, C. S. (1975). The role of expectations and attributions in the alleviation of learned helplessness. *Journal of Personality and Social Psychology, 31,* 674-685.

Dweck, C. S. (1986). Motivational processes affecting learning. *American Psychologist, 4*, 1040–1048.

Dweck, C. S. (2007). The perils and promises of praise. *Educational Leadership, 65*(2), 34-39.

Dweck, C. S., Chiu, C., & Hong, Y. (1995). Implicit theories and their role in judgments and reactions: A world from two perspectives. *Psychological Inquiry, 6*(4), 267-285.

Dweck, C. S., & Elliott, E. S. (1983). Achievement motivation. In P. H. Mussen & E. M. Hetherington (Eds.), *Handbook of Child Psychology: Vol. IV. Social and Personality Development* (pp. 643-691). NY: Wiley.

Dweck, C. S., & Leggett, E. L. (1988). A social cognitive approach to motivation and personality. *Psychological Review, 95,* 256-273.

Dweck, C. S., & Molden, D. C. (2005). Self-theories: Their impact on competence motivation and acquisition. In A. J. Elliot & C. S. Dweck (Eds.) *Handbook of competence and motivation* (pp. 122-140). New York, NY: Guilford.

Elliot, A. J. (2005). A conceptual history of the achievement goal construct. In A. J. Elliott & C. S. Dweck (Eds.), *Handbook of competence and motivation* (pp. 52- 72). New York, NY: Guilford.

Elliott, E. S., & Dweck, C. S. (1988). Goals: An approach to motivation and achievement. *Journal of Personality & Social Psychology, 54*, 5-12.

Elliot A. J., & Harackiewicz J. M. (1996). Approach and avoidance achievement goals and intrinsic motivation: a mediational analysis. *Journal of Personality and Social Psychology, 70*, 968–80.

Engle, J. (2007). Postsecondary access and success for first-generation college students. *American Academic, 3*, 25-48.

Engle, J., & Tinto, V. (2008). *Moving beyond access: College success for low-income, first-generation students*. Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education.

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods, 41*, 1149-1160.

Fischer, M. J. (2007). Settling into campus life: Differences by race/ethnicity in college involvement and outcomes. *The Journal of Higher Education, 78*(2), 125-161.

Fischer, M. J. (2009). A longitudinal examination of the role of stereotype threat and racial climate on college outcomes for minorities at elite institutions. *Social Psychology Education, 13*(19), 19-40.

Fredrickson, B. L. (2001). The role of positive emotions in positive psychology. *American Psychologist, 56*, 218–226.

Gardner, P. D. (2000). From drift to engagement: Finding purpose and making career connections in the sophomore year. In L. A. Schreiner & J. Pattengale. (Eds.), Visible solutions for invisible students: Helping sophomores succeed (Monograph

31) (pp. 67-77). Columbia, SC: University of South Carolina, National Resource Center for The First-Year Experience and Students in Transition.

Gil, A., Wagner, E., & Vega, W. (2000). Acculturation, familism and alcohol use among Latino adolescent males: Longitudinal relations. *Journal of Community Psychology,* 28, 443-458.

Gilbert, P., Clarke, M., Kemple, S., Miles, J. N. V., Isons, C. (2004). Criticizing and reassuring oneself: An exploration of forms, style, and reasons in female students. *British Journal of Clinical Psychology,* 43, 31–50.

Gilbert, P. (2005). Compassion: Conceptualisations, research and use in psychotherapy. London: Routledge.

Gloria, A. M., & Ho, T. A. (2003). Environmental, social, and psychological experiences of Asian American undergraduates: Examining issues of academic persistence. *Journal of Counseling & Development, 81,* 93-105.

Grant, H. (2004). *Goal orientations influence both knowledge and use of self-regulated learning strategies.* Unpublished data, New York University, NY.

Greene, B. A., & Miller, R. B. (1996). Influences on achievement: Goals, perceived ability, and cognitive engagement. *Contemporary Educational Psychology, 21*(2), 181-192.

Gullatt, Y. & W. Jan. (2003). How Do Precollegiate Academic Outreach Programs Impact College-Going among Underrepresented Students? Boston, MA: Pathways to College Network.

Hall, C., Smith, K., & Chia, R. (2008). Cognitive and personality factors in relation to timely completion of a college degree. *College Student Journal, 42*(4), 1087-1098.

Hans-Vaughn, D. (2004). The impact of parents' education level on college students: An analysis using the beginning postsecondary students longitudinal study 1990-92/94. *Journal of College Student Development, 45*(5), 483-500.

Harackiewicz, J. M., Pintrich, P. R., Barron, K. E., & Elliot, A. J. & Thrash, T. M. (2002). Revision of achievement goal theory: Necessary and illuminating. *Journal of Educational Psychology, 94*(3), 638-645.

Herman, W. E. (1990). Fear of failure as a distinctive personality trait measure of test anxiety. *Journal of Research and Development in Education*, *23*, 180 – 185.

Hertel, J. B. (2002). College student generation status: Similarities, differences, and factors in college adjustment, *The Psychological Record, 52*, 3-18.

Higbee, J. L, & Thomas, P. V. (1999). Affective and cognitive factors related to mathematics achievement. *Journal of Developmental Education, 23*(1), 8-10.

Hong, Y., Chiu, C, Dweck, C. S., Lin, D. M. S., & Wan, W. (1999). Implicit theories, attributions, and coping: A meaning system approach. *Journal of Personality and Social Psychology*, 77, 588-599.

Horn, L. J. & Chen, X. (1998). *Towards resiliency: At-risk students who make it to college.* Washington, DC: U.S. Department of Education Office of Educational Research and Improvement.

Horn, L. J., & Premo, M. (1995). *Profile of undergraduates in U.S. postsecondary*

institutions. Washington, DC: National Center for Education Statistics.

Hussar, W. J., & Bailey, T. M. (2009). *Projections of education statistics to 2018 (NCES 2009-062)*. Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education

Hunter, M. S., Tobolowsky, B. F., Gardner, J. N., Evenbeck, S. E., Pattengale, J. A., Schaller, M. A., Schreiner, L. A., & Associates. (2010). Helping sophomores succeed: Understanding and improving the second-year experience. San Francisco, CA: Jossey Bass.

Ishitani, T. (2006). Studying attrition and degree completion behavior among forst-generation college students in the United States. *The Journal of Higher Education, 77*(5), 861-885.

Iskender, M. (2009). The relationship between self-compassion, self-efficacy, and control beliefs about learning in Turkish university students. *Social Behavior and Personality, 37*, 711-720.

Jehangir, R. R. (2008). Cultivating voice: First-generation students seek full academic citizenship in multicultural learning communities. *Innovative Higher Education, 34*(1), 33-49.

Karabenick, S. A., & Knapp, J. R. (1991). Relationship of academic help-seeking to the use of learning strategies and other instrumental achievement behavior in college students. *Journal of Educational Psychology, 83,* 221–230.

Karen, D. (2002). Changes in access to higher education in the United States: 1980-1992. *Sociology of Education, 75*(3), 191-210.

Keith, T. Z. (2006). *Multiple regression and beyond.* Boston, MA: Pearson.

Kitsantas, A. & Chow, A. (2007). College students' perceived threat and preference for seeking help in traditional, distributed, and distance learning environments. *Computers & Education, 48*, 383–395.

Kirkpatrick, K. L. (2005). *Enhancing self-compassion using a gestalt two-chair intervention.* Unpublished doctoral dissertation.

Leary, M. R., Tate, E. B., Adams, C. E., Allen, A. B., & Hancock, J. (2007). Self-compassion and reactions to unpleasant self-relevant events: The implications of treating oneself kindly. *Journal of Personality and Social Psychology, 92,* 887–904.

Lefcourt, H. M. (1991). Locus of control. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.), *Measures of personality and social psychological attitudes* (pp. 413–499). San Diego, CA: Academic Press, Inc.

Linnenbrink, E. A., & Pintrich, P. R. (2002). Achievement goal theory and affect: An asymmetrical bidirectional model. *Educational Psychologist, 37,* 69-78.

Lohfink, M. M., & Paulsen, M. B. (2005). Comparing the determinants of persistence for first-generation and continuing-generation students. *Journal of College Student Development, 46*(4), 409-428.

Ma, X., & Xu, J. (2004). Determining the causal ordering between attitude toward mathematics and achievement in mathematics. *American Journal of Education, 110*(3), 256-280.

Majer, J. M. (2009). Self-efficacy and academic success among ethnically diverse first-generation community college students. *Journal of Diversity in Higher Education, 2*(4), 243–250.

Mantzicopoulos, P. (1997). How do children cope with school failure? A study of social/ emotional factors related to children's coping strategies. *Psychology in the Schools, 34*, 229 – 237.

Martin, A. J., & Marsh, H. W. (2003). Fear of failure: Friend or foe? *Australian Psychologist, 38*(1), 31-38.

Martin, A. J., & Marsh, H. W. (2008). Academic buoyancy: Towards an understanding of students' everyday academic resilience. *Journal of School Psychology, 46,* 53–58.

Martinez, J. A, Sher, K. J., Krull, J. L., & Wood, P. K. (2009). Blue-collar scholars?: Mediators and moderators of university attrition in first-generation college students. *Journal of College Student Development, 50*(1), 87-103.

McCarron, G. P. & Inkelas, K. K. (2006). The gap between educational aspirations and attainment for first-generation college students and the role of parental involvement. *Journal of College Student Development, 47*(5), 534-549.

Midgley, C., Maehr, M. L., Hruda, L. A., Anderman, E., Anderman, L., Gheen, M., et al. (2000). *Manual for the Patterns of Adaptive Learning Scale.* Ann Arbor: University of Michigan.

Mosewich, A. D., Kowalski, K. C., Sabiston, C. M., Sedgwick, W. A., & Tracy, J. L. (2011). Self-compassion: A potential resource of young women athletes. *Journal of Sport & Exercise Psychology, 33,* 103-123.

National Center for Education Statistics. (2009). *Digest of education statistics, 2008.* Washington, DC: Author

Neely, M. E., Schallert, D. L., Mohammed, S. S., Roberts, R. M., & Chen, Y. (2009). Self-kindness when facing stress: The role of self-compassion, goal regulation, and support in college students' well-being. *Motivation and Emotion, 33,* 88-97.

Neff, K. D. (2003a). Development and validation of a scale to measure self-compassion. *Self and Identity, 2,* 223-250.

Neff, K. D. (2003b). Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. *Self and Identity, 2,* 85-102.

Neff, K. D. (2009). Self-compassion. In M. R. Leary & R. H. Hoyle (Eds.), *Handbook of Individual Differences in Social Behavior (*pp. 561-573). NY: Guilford.

Neff, K. D. (2011). Self-compassion, self-esteem, and well-being. *Social and Personality Compass, 5,* 1-12.

Neff, K. D., Hseih, Y., & Dejitthirat, K. (2005). Self-compassion, achievement goals, and coping with academic failure. *Self and Identity, 4,* 263-287.

Neff, K. D., Kirkpatrick, K., & Rude, S. S. (2007a). Self-compassion and its link to adaptive psychological functioning. *Journal of Research in Personality, 41,* 139-154.

Neff, K. D., & McGeehee, P. (2010). Self-compassion and psychological resilience among adolescents and young adults. *Self and Identity, 9,* 225-240.

Neff, K. D., & Vonk, R. (2009). Self-compassion versus global self-esteem: Two different ways of relating to oneself. *Journal of Personality, 77*, 23-50.

Office of Research, University of Texas at Austin Admissions. Retrieved: http://bealonghorn.utexas.edu/whyut/profile.

Olive, T. (2008). Desire for higher education in first-generation Hispanic college students enrolled in an academic support program: A phenomenological analysis. *Journal of Phenomenological Psychology, 39*, 81–110.

Oliverez, P. M. and W. G. Tierney. (2005). Show us the money: Low-income students, families, and financial aid. University of Southern California: Center for Higher Education Policy Analysis.

Padilla, R. V., Trevino, J., Trevino, J., Gonzales, K. (1997). Developing local models of minority students' success in college. *Journal of College Student Development, 38*(2), 125-135.

Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research*, *66*(4), 543-578.

Pajares, F. (2002). *Self-efficacy beliefs in academic contexts: An outline*. Retrieved: http://des.emory.edu/mfp/efftalk.html.

Pajares, F., & Miller, M. D. (1994). Role of self-efficacy and self-concept beliefs in mathematical problem solving: A path analysis. *Journal of Educational Psychology, 86*(2), 193-203.

Pascarella, E. T., Pierson, C. T., Wolniak, G. C., & Terenzini, P. T. (2004). First-generation college students: Additional evidence on college experiences and outcomes. *The Journal of Higher Education, 75*, 249–284.

Penrose, A. M. (2002). Academic literacy perceptions and performance: Comparing first-generation and continuing-generation college students. *Research in the Teaching of English, 36*(4), 437-461.

Perez, L. X. (1998). Sorting, supporting, connecting, and transforming: Intervention strategies for students at risk. *Community College Review***,** *26(*1), 63-78.

Perna, L. (2000). Differences in the decision to attend college among African Americans, Hispanics, and Whites. *The Journal of Higher Education, 71*(2), 117-141.

Phinney, J. S. (1996). When we talk about American ethnic groups, what do we mean? *American Psychologist, 51*(9), 918-927.

Pietsch, J., Walker, & R., Chapman, E. (2003). The relationship among self-concept, self-efficacy, and performance in mathematics during secondary school. *Journal of Educational Psychology, 95*(3), 589-603.

Pike, G. R., & Kuh, G. D. (2005). First and second-generation college students: A comparison of their engagement and intellectual development. *Journal of Higher Education, 76*, 276–300.

Pintrich, P. R. (2004). A conceptual framework for assessing motivation and self-regulated learning in college students. *Educational Psychology Review, 16,* 385-407.

Pintrich, P. R., & Schunk, D. H. (1996). *Motivation in education: Theory, research, and applications.* NJ: Merrill/Prentice-Hall.

Pintrich, P. R., Smith, D. A. F., Garcia, T., & McKeachie, W. J. (1993). Reliability and predictive validity of the Motivated Strategies for Learning Questionnaire (MSLQ). *Educational and Psychological Measurement, 53,* 801–813.

Pizzolato, J. E. (2004). Coping with conflict: Self-authorship, coping, and adaptation to college in first-year, high-risk students, *Journal of College Student Development, 45*(4), 425-442.

Prospero, M., & Vohra-Gupta, S. (2007). First generation college students: Motivation, integration, and academic achievement. *Community College Journal of Research and Practice, 31*(12), 963-975.

Ramirez, J R., Crespo, W. D., Quist, R., Burgoon, M., Alvaro, E. M., & Grandpre, J. (2004). Acculturation, familism, parental monitoring, and knowledge of predictors of marijuana and inhalant use in adolescents. *Psychology of Addictive Behaviors, 18,* 3-11.

Ramos-Sanchez, L., & Nichols, L. (2007). Self-efficacy of first-generation and non-first-generation college students: The relationship with academic performance and college adjustment. *Journal of College Counseling, 10,* 6-18.

Rau, W., & Heyl, B. S. (1990). Humanizing the college classroom: Collaborative learning and social organization among students. *Teaching Sociology, 18,* 141-155.

Reeve, J., Deci, E. L., & Ryan, R. M. (2004). Self-determination theory: A dialectical framework for understanding socio-cultural influences on student motivation. In D. M. McInerney & S. van Etten (Eds.), *Big theories revisited* (pp. 31-60). Greenwich, CT: Information Age Publishing.

Richardson, R. C. & Skinner, E. F. (1992). Helping first generation minority students achieve degrees. In L. S. Zwerling & H. B. London (Eds.), First generation college students: Confronting the cultural issues. CA: Jossey-Bass.

Robbins, S. B., Allen, J., Casillas, A., Peterson, C. H., & Le, H. (2006). Unraveling the differential effects of motivational and skills, social, and self-management measures from traditional predictors of college outcomes. *Journal of Educational Psychology, 98,* 598- 616.

Robbins, S. B., Lauver, K., Le, H., Davis, D., Langley, R., & Carlstrom, A. (2004). Do psychosocial and study skill factors predict college outcomes? A meta-analysis. *Psychological Bulletin, 130*(2), 261-288.

Robins, R. W., & Pals, J. L. (2002). Implicit self-theories in the academic domain: Implications for goal orientation, attributions, affect, and self-esteem change. *Self and Identity, 1,* 313-336.

Roderick, M., Nagaoka, J., Coca, V. (2009). College readiness for all: The challenge for urban high schools. *The Future of Children, 19*(1), 185-210.

Roeser, R. W., Midgley, C., & Urdan, T. C. (1996). Perceptions of the school psychological environment and early adolescents' psychological and behavioral

functioning in school: The mediating role of goals and belonging. *Journal of Educational Psychology, 88*(3), 408-422.

Ryan, R.M., & Connell, J.P. (1989). Perceived locus of causality and internalization: Examining reasons for acting in two domains. *Journal of Personality and Social Psychology, 57*, 749-761.

Ryan, R. M. & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*, 68- 78.

Ryan, A. M., & Pintrich, P. R. (1997). "Should I ask for help?" The role of motivation and attitudes in adolescents' help seeking in math class. *Journal of Educational Psychology, 89*(2), 329-341.

Ryff, C. D. (1989b). "Happiness Is Everything, or Is It? Explorations on the Meaning of Psychological Well-Being." *Journal of Personality and Social Psychology 57*(6), 1069-1081.

Saunders, M., & Serna, I. (2004). Making college happen: The college experiences of first-generation Latino students. *Journal of Hispanic Higher Education, 3*(2), 146-163.

Schunk, D. (1990). Goal setting and self-efficacy during self-regulated learning. *Educational Psychologist, 25*(1), 71–86.

Schunk, D. H. (1995). Self-efficacy and education and instruction. In J. E. Maddux (Ed.), *Self- efficacy, adaptation, and adjustment: Theory, research, and application* (pp. 281-303). NY: Plenum.

Schwartz, S. J. (2007). The applicability of familism to diverse ethnic groups: A preliminary study. *The Journal of Social Psychology, 147*(2), 101-118.

Seidman, A. (2005). Minority student retention: Resources for practitioners. *New Directions for Institutional Research, 125,* 7-24.

Sellers, D. Dochen, C. W. & Hodges, R. (2011). *Academic transformation: The road to college success.* (2nd Ed.). Boston, MA: Pearson Education.

Sheilds, N. (2001). Stress, active coping, and academic performance among persisting and nonpersisting college students. *Journal of Applied Biobehavioral Research, 6*(2), 65-81.

Somers, P., Woodhouse, S., & Cofer, J. (2004). Pushing the boulder uphill: The persistence of first-generation college students. *NASPA Journal, 41*(3), 418-435.

Sriram, R. (2010). *Rethinking intelligence: The role of mindset in promoting success for academically high-risk college students.* Unpublished doctoral dissertation.

Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual performance of African-Americans. *Journal of Personality and Social Psychology, 69*(5), 797-811.

Stephens, N. M., Fryberg, S. A., Markus, H. A., Johnson, C. S., & Covarrubias, R. (2012). Unseen disadvantage: How American' universities' focus on independent undermines the academic performance of first-generation college students. *Journal of Personality and Social Psychology, 101*(1), 1-20.

Striplin, J. J. (1999). Facilitating transfer for first-generation community college students. *ERIC Digest*. Los Angeles, CA: ERIC Clearinghouse for Community Colleges.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). Boston, MA: Allyn and Bacon.

Tang, M. (2008). Psychological impacts of "model minority" on Asian American. In G. Li & L. Wang (Eds.), Model Minority Myth Revisited: An Interdisciplinary Approach to Demystifying Asian American Educational Experiences (pp.117-132). Charlotte, NC: Information Age Publishing.

Taylor, L. C., Clayton, J. D., & Rowley, S. (2004). Academic socialization: Understanding parental influences on children's school-related development in the early years. *Review of General Psychology, 8*(3), 163-178.

Terenzini, P., Cabrera, A., & Bernal, E. (2001). *Swimming against the tide: The poor in American higher education,* The College Board, New York, NY (College Board Research Report No. 2001–3).

Terenzini, P. T., Springer, L., Yaeger, P. M., Pascarella, E. T., & Nora, A. (1996). First-generation college students: Characteristics, experiences, and cognitive development. *Research in Higher Education, 37,* 1–22.

Ting, S. M. (2003). A longitudinal study of non-cognitive variables in predicting academic success of first-generation college students. *College & University, 78*(4), 27-31.

Tinto, V. (2003). *Promoting student retention through classroom practice.* Paper presented at the conference on Enhancing Student Retention: Using International Policy and Practice, Amsterdam, Netherlands.

Tobolowsky, B.F., Cox, B.E. (2007a), *Shedding Light on Sophomores an Exploration of the Second College Year*, National Resource Center for The First-year Experience and Students in Transition, University of South Carolina, Columbia, SC, The First-year Experience Monograph Series No. 47, pp. 63-74.

Torres, K. C., & Charles, C. Z. (2004). Metastereotypes and the Black–White divide: A qualitative view of race on an Elite college campus. *Du Bois Review: Social Science Research on Race, 1*(1), 115-149.

Tseng, V. (2004). Family interdependence and academic adjustment in college: Youths from immigrant and U.S- born families. *Child Development, 75*, 966-983.

Turner, J. E., Husman, J., & Schallert, D. L. (2002). The importance of student's goals in their emotional experience of academic failure: Investigating the precursors and consequences of shame. *Educational Psychologist, 37,* 79-89.

U.S. Bureau of the Census. (2007). *County Population Estimates by Demographic Characteristics—Age, Sex, Race, and Hispanic Origin*. Retrieved from: http://www.census.gov/popest/counties/asrh

U.S. Department of Education, National Center for Education Statistics. (2000). *Mapping the Road to College: First-Generation Students' Math Track, Planning Strategies, and Context of Support*. Washington, DC: Horn and Nunez.

U.S. Department of Education, National Center for Education Statistics. (2005). *Digest of Education Statistics 2005*. Washington, DC: Chen.

U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. (2005). High School Transcript Study (HSTS); 1990-2005. Retrieved: http://nationsreportcard.gov/hsts_ 2005/ data_hs_gpa_3a_1c.asp

U.S. Department of Education, National Center for Education Statistics. (2009). *2007–08 National Postsecondary Student Aid Study (NPSAS:08) Student Financial Aid Estimates for 2007–08,* Table 1, Table 2, Table 3, and Table 4.

U.S. Department of Education. (2009). Nations' Report Card. Retrieved http://nationsreportcard.gov/science_2009/

Usher, E. L., & Pajares, F. (2008). Sources of self-efficacy in school: Critical review of the literature and future directions. *Review of Educational Research, 78*, 751-796.

Volet, S., & Karabenick, S. A. (2006). Help Seeking in Cultural Context. In S. A. Karabenick, R. S. Newman, S. A. Karabenick, R. S. Newman (Eds.) , *Help seeking in academic setting: Goals, groups, and contexts* (pp. 117-150). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

Vuong, M., Brown-Welty, S., & Tracz. S. (2010). The effects of self-efficacy on academic success of first-generation college sophomore students. *Journal of College Student Development 51*(1), 50-64.

Wei, M., Heppner, P. P., Ku, T.-Y., & Liao, K. Y.-H. (2010). Racial discrimination stress, coping, and depressive symptoms among Asian Americans: A moderation analysis. *Asian American Journal of Psychology, 1,* 136–150.

Weinstein, C. E. (2007). *Model of strategic learning*. Clearwater, FL: H&H Publishing.

Weinstein, C. E., & Mayer, R. E. (1986). The teaching of learning strategies. In Wittrock,

M.C. (Ed.), *Handbook of research on teaching* (pp. 315-327), New York, NY: Macmillan.

Weinstein, C. E., Meyer, D. K., Husman, J., McKeachie, W.J., & King, C.A. (2011). Teaching students how to become more strategic and self-regulated learners. In M. Svinicki & W. J. McKeachie (Eds.), *McKeachie's teaching tips: Strategies, research, and theory for college and university teachers* (13th ed., pp. 292-307). CA: Wadsworth.

Weinstein, C. E., Palmer, D. R., & Schulte, A. C. (2002). *Learning and study strategies inventory* (2nd ed.). FL: H&H.

Weinstein, C. E., Tomberlin, T. L., Julie, A. L., & Kim, J. (2004). Helping students to become strategic learners: The role of assessment, teachers, instruction, and students. In J. Ee, A. Chang, & O. Tan (Eds.), *Thinking about thinking: What educators need to know* (pp. 282-310). Singapore: McGraw Hill.

Wells, A., & Matthews, G. (1994). *Attention and emotion: A clinical perspective.* Hove (UK): Erlbaum.

Williams, G. C., & Deci, E. L. (1996). Internalization of biopsychosocial values by medical students: A test of self-determination theory. *Journal of Personality and Social Psychology*, *70*, 767-779.

Williams, P. E., & Hellman, C. M. (2004). Differences in self-regulation for online learning between first- and second-generation college students. *Research in Higher Education, 45*(1), 71-82.

Williams, J. G., Stark, S. K., & Foster, E. E. (2008). Start today or the very last day? The

relationships among self-compassion, motivation, and procrastination. *American Journal of Psychological Research, 4*(1), 37-44.

Yazedijan, A., Toews, M. L., Sevin, T., & Purswell, K. E. (2008). "It's a whole new world." A qualitative exploration of college students' definitions of and strategies for college success. *Journal of College Student Development, 49*(2), 141-154.

Zalaquett, C. P. (1999). Do students of non-college educated parents achieve less academically than students of college-educated parents? *Psychological Reports, 85*, 417-421.

Ziomek, R. L., & Svec, J. C. (1997). High school grades and achievement: Evidence of grade inflation. *NASSP Bulletin, 81*(575), 105-113.

Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. In M. Boekaerts, P. R. Pintrich, M. H. Zeidner, Eds. 2000. *Handbook of Self-Regulation*. CA: Academic Press.

Zimmerman, B. J., Bandura, A., & Martinez-Pons, M. (1992). Self-motivation for academic attainment: The role of self-efficacy beliefs and personal goal setting. *American Educational Research Journal, 29*, 663-676.